District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 S. First St., Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources Department

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-141
Revised August 24, 2018
Submit to appropriate OCD District office

Incident ID	NAB1909527986
District RP	2 2RP-5330
Facility ID	
Application ID	pAB1909527559

Release Notification

Responsible Party

Responsible Party XTO Energy	OGRID 5380
Contact Name Kyle Littrell	Contact Telephone 432-221-7331
Contact email Kyle_Littrell@xtoenergy.com	Incident # *(assigned by OCD)* NAB1909527986
Contact mailing address 522 W. Mermod, Carlsbad, NM 88220	

Location of Release Source

Latitude 32.000694° Longitude -103.915633°

(NAD 83 in decimal degrees to 5 decimal places)

Site Name Ross Draw 3031 Battery	Site Type Bulk Storage and Separation Facility
Date Release Discovered 3/10/2019	API# *(if applicable)* 30-015-45121 (RD 31 Fed WAL Com 6H)

Unit Letter	Section	Township	Range	County
H	31	26S	30E	Eddy

Surface Owner: ☐ State ☒ Federal ☐ Tribal ☐ Private (*Name:* BLM)

Nature and Volume of Release

Material(s) Released (Select all that apply and attach calculations or specific justification for the volumes provided below)

☒ Crude Oil	Volume Released (bbls) 14	Volume Recovered (bbls) 13
☐ Produced Water	Volume Released (bbls)	Volume Recovered (bbls)
	Is the concentration of total dissolved solids (TDS) in the produced water >10,000 mg/l?	☐ Yes ☐ No
☐ Condensate	Volume Released (bbls)	Volume Recovered (bbls)
☐ Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
☐ Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release

A release of fluid occurred from the suction side of the new LACT unit. The nuts were only hand tightened on one of the flanges. The nuts loosened and allowed fluid to escape. A vacuum truck recovered standing fluid from the well pad. The flange was properly tightened and the facility returned to production. Additional third party resources have been retained to assist with remediation.

State of New Mexico
Oil Conservation Division

Incident ID	NAB1909527986
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Facility ID	
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Was this a major release as defined by 19.15.29.7(A) NMAC? ☐ Yes ☒ No	If YES, for what reason(s) does the responsible party consider this a major release? N/A
If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)? N/A	

Initial Response

The responsible party must undertake the following actions immediately unless they could create a safety hazard that would result in injury

☒ The source of the release has been stopped.
☒ The impacted area has been secured to protect human health and the environment.
☒ Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices.
☒ All free liquids and recoverable materials have been removed and managed appropriately.

If all the actions described above have not been undertaken, explain why:
N/A

Per 19.15.29.8 B. (4) NMAC the responsible party may commence remediation immediately after discovery of a release. If remediation has begun, please attach a narrative of actions to date. If remedial efforts have been successfully completed or if the release occurred within a lined containment area (see 19.15.29.11(A)(5)(a) NMAC), please attach all information needed for closure evaluation.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Printed Name: Kyle Littrell Title: SH&E Supervisor

Signature: [signature] Date: 3-22-19

email: Kyle_Littrell@xtoenergy.com Telephone: 432-221-7331

OCD Only

Received by: [signature] Date: 4/5/2019

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	**2RP-5330**
Facility ID	
Application ID	

Site Assessment/Characterization

This information must be provided to the appropriate district office no later than 90 days after the release discovery date.

What is the shallowest depth to groundwater beneath the area affected by the release?	< 50 (ft bgs)
Did this release impact groundwater or surface water?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	☐ Yes ☒ No
Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	☐ Yes ☒ No
Are the lateral extents of the release within 500 horizontal feet of a spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes?	☐ Yes ☒ No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	☐ Yes ☒ No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of a wetland?	☐ Yes ☒ No
Are the lateral extents of the release overlying a subsurface mine?	☐ Yes ☒ No
Are the lateral extents of the release overlying an unstable area such as karst geology?	☒ Yes ☐ No
Are the lateral extents of the release within a 100-year floodplain?	☐ Yes ☒ No
Did the release impact areas **not** on an exploration, development, production, or storage site?	☐ Yes ☒ No

Attach a comprehensive report (electronic submittals in .pdf format are preferred) demonstrating the lateral and vertical extents of soil contamination associated with the release have been determined. Refer to 19.15.29.11 NMAC for specifics.

Characterization Report Checklist: ***Each of the following items must be included in the report.***

☒ Scaled site map showing impacted area, surface features, subsurface features, delineation points, and monitoring wells.
☒ Field data
☒ Data table of soil contaminant concentration data
☒ Depth to water determination
☒ Determination of water sources and significant watercourses within ½-mile of the lateral extents of the release
☒ Boring or excavation logs
☒ Photographs including date and GIS information
☒ Topographic/Aerial maps
☒ Laboratory data including chain of custody

If the site characterization report does not include completed efforts at remediation of the release, the report must include a proposed remediation plan. That plan must include the estimated volume of material to be remediated, the proposed remediation technique, proposed sampling plan and methods, anticipated timelines for beginning and completing the remediation. The closure criteria for a release are contained in Table 1 of 19.15.29.12 NMAC, however, use of the table is modified by site- and release-specific parameters.

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	**2RP-5330**
Facility ID	
Application ID	

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Printed Name: _____Kyle Littrell_____ Title: _____SH&E Supervisor_____

Signature:_____ Date: ____8/20/2019_____

email: _____ Kyle_Littrell@xtoenergy.com _____ Telephone: ____(432)-221-7331_____

OCD Only

Received by: _____ Date: _____

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	**2RP-5330**
Facility ID	
Application ID	

Remediation Plan

Remediation Plan Checklist: ***Each of the following items must be included in the plan.***

☐ Detailed description of proposed remediation technique
☐ Scaled sitemap with GPS coordinates showing delineation points
☐ Estimated volume of material to be remediated
☐ Closure criteria is to Table 1 specifications subject to 19.15.29.12(C)(4) NMAC
☐ Proposed schedule for remediation (note if remediation plan timeline is more than 90 days OCD approval is required)

Deferral Requests Only: ***Each of the following items must be confirmed as part of any request for deferral of remediation.***

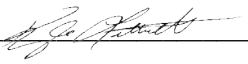
☒ Contamination must be in areas immediately under or around production equipment where remediation could cause a major facility deconstruction.

☒ Extents of contamination must be fully delineated.

☒ Contamination does not cause an imminent risk to human health, the environment, or groundwater.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Printed Name: Kyle Littrell Title: SH&E Coordinator

Signature:  Date: 8/20/2019

email: Kyle_Littrell@xtoenergy.com Telephone: 432-221-7331

OCD Only

Received by: _____ Date: _____

☐ Approved ☐ Approved with Attached Conditions of Approval ☐ Denied ☐ Deferral Approved

Signature: _____ Date: _____

LT Environmental, Inc.
3300 North "A" Street
Building 1, Unit 103
Midland, Texas 79705
432.704.5178

August 20, 2019

Mr. Mike Bratcher
New Mexico Oil Conservation Division
811 South First Street
Artesia, New Mexico 88210

RE: Deferral Request - Addendum
Ross Draw 3031 Battery
Remediation Permit Number 2RP-5330
Eddy County, New Mexico

Dear Mr. Bratcher:

LT Environmental, Inc. (LTE), on behalf of XTO Energy, Inc. (XTO), presents the following Deferral Request Addendum for remediation of impacted soil at the Ross Draw 3031 Battery (Site) located in Unit H, Section 31, Township 26 South, Range 30 East, in Eddy County, New Mexico (Figure 1).

BACKGROUND

On June 7, 2019, LTE submitted a Deferral Request to the New Mexico Oil Conservation Division (NMOCD) for impacted soil from a March 10, 2019 crude oil release associated with the lease automatic custody transfer (LACT) unit at the Site. The Remediation Permit (RP) Number is 2RP-5330. LTE personnel collected preliminary and delineation soil samples within and around the release extent during March and May 2019, to assess the lateral and vertical extent of impacts to soil. The preliminary and delineation soil samples are depicted on Figure 2 and Figure 3, respectively. Deferral was requested due to residual impacted soil left in place around and beneath active process equipment and pipelines and for compliance with XTO's safety policy regarding earth-moving activities within 2 feet of active process equipment and pipelines.

On June 18, 2019, the NMOCD denied deferral, via email, based on the following reasoning:

> *Due to the sensitive nature of the spill site, the OCD denies the deferral request at this time. The site is <50 to groundwater and high karst, which will require additional excavation. The TPH levels are extremely high and need to be addressed. Please attempt to remove as much as possible (12"+) with shovels and/or a hydrovac and resample. The OCD may be able to defer the SS01 through SS04 sample points if TPH levels are decreased substantially, but still over the limit. The sample points that are still over the limit would need to be treated with Micro-Blaze or liquid with microbial strains, surfactants and nutrients designed to digest organics and hydrocarbons.*

ADDITIONAL SITE ACTIVITIES

LTE completed the following activities to address the deficiencies outlined in the June 18, 2019, email.

Due to the density and proximity of active process equipment and pipelines, hand shoveling was completed to the maximum extent feasible. Full remediation of soil would require major facility and pad deconstruction. Upon completion of the hand shoveled excavation, LTE collected 5-point composite soil samples (FS01 through FS07) from the floor of the excavation from depths of approximately 0.5 feet bgs to 0.8 feet bgs. The 5-point composite samples were collected by depositing 5 aliquots of soil into a 1-gallon, re-sealable plastic bag and homogenizing the samples by thorough mixing. Samples were then placed directly into pre-cleaned glass jars, labeled with location, date, time, sampler, method of analysis, and immediately placed on ice. The soil samples were shipped at 4 degrees Celsius (°C) under strict chain-of-custody procedures to Xenco Laboratories (Xenco) in Midland, Texas, for analysis of BTEX by United States Environmental Protection Agency (USEPA) Method 8021B, TPH-gasoline range organics (GRO), TPH-diesel range organics (DRO), and TPH-oil range organics (ORO) by USEPA Method 8015M/D, and chloride by USEPA Method 300.

The excavation extent measured approximately 1,270 square feet in area. A total of approximately 30 cubic yards of impacted soil was removed from the excavation. The impacted soil was transported and properly disposed of at the Lea Land landfill facility located in Hobbs, New Mexico. The horizontal extent of the excavation and excavation soil sample locations are presented on Figure 4.

SOIL ANALYTICAL RESULTS

Laboratory analytical results indicated that excavation floor samples FS05 and FS07 were compliant with the NMOCD Table 1 Closure Criteria (Closure Criteria) for benzene, BTEX, TPH, and chloride. Laboratory analytical results indicated that excavation floor samples FS01 through FS04 and FS06 exceeded the Closure Criteria for TPH or chloride, but were significantly reduced from previous sample results. Laboratory analytical results are summarized in Table 1 and the complete laboratory analytical reports are included as Attachment 2.

DEFERRAL REQUEST

Due to the density and proximity of the active process equipment and pipelines, hand shoveling was completed to the maximum extent feasible. Approximately 30 cubic yards of impacted soil were excavated from the Site; however, residual impacted soil was left in-place around and beneath active process equipment and pipelines for compliance with XTO's safety policy regarding earth-moving activities within 2 feet of active process equipment and pipelines. Full remediation of soil around the equipment would require major facility and pad deconstruction.

The majority of the free-standing liquid was recovered during initial response activities and no saturated soil remains in place. The Site has a perimeter berm that will prevent any offsite migration of remaining surficial impact near production equipment. Although groundwater is estimated to be less than 50 feet deep at the Site, bedrock lithology is likely to restrict vertical migration of remaining contaminants.

TPH concentrations in residual impacted soil range from 29.0 mg/kg to 7,130 mg/kg and are comprised primarily of DRO and ORO components. These heavier-chain hydrocarbon constituents are less mobile in soil than GRO, which was limited in detection based on the laboratory analytical results. Chloride concentrations exceeded the Closure Criteria in one excavation floor sample at a concentration of 1,100 mg/kg. Chloride concentrations were below the 600 mg/kg Closure Criteria in all other soil samples collected. Lithology at the Site consists of approximately 3 feet to 4 feet of clays, alluvial silts, and sands overlying the fine-grained bedrock, interpreted by the site geologist as a consolidated caliche. The released liquids likely migrated vertically through the alluvial deposits but were restricted from significant penetration through the bedrock. Based on the fine-grained properties of the bedrock, it is unlikely that migration of contaminants to groundwater will occur before soil can be remediated.

During May 2019, LTE personnel advanced boreholes in and around the release area to depths ranging from 1 foot bgs to 4 feet bgs. Two delineation soil samples were collected for laboratory analysis from each borehole. The delineation soil samples were collected, handled, and analyzed as described above and submitted to Xenco in Midland, Texas. Laboratory analytical results indicated that benzene, BTEX, TPH, and chloride concentrations were compliant with the Closure Criteria in all delineation soil samples. Based on the laboratory analytical results, the lateral and vertical extent of impacted soil is defined. Laboratory analytical results are presented on Figure 3 and summarized in Table 1, and the laboratory analytical reports are included in Attachment 2.

Based on the site conditions, XTO requests to backfill the existing excavation and complete remediation during any future major well pad construction/alteration or final plugging and abandonment, whichever is sooner. Prior to backfilling, a surfactant designed to digest organics and hydrocarbons will be applied to soil remaining in place with TPH concentrations exceeding the Closure Criteria. LTE and XTO do not believe deferment will result in imminent risk to human health, the environment, or groundwater. An updated NMOCD Form C-141 is included as Attachment 1 and a Photographic Log is included as Attachment 3.

If you have any questions or comments, please do not hesitate to contact Ms. Ashley Ager at (970) 385-1096 or aager@ltenv.com.

Sincerely,

LT ENVIRONMENTAL, INC.

Carol Ann Whaley
Staff Geologist

Ashley L. Ager, M.S., P.G.
Senior Geologist

cc: Kyle Littrell, XTO
Victoria Venegas, NMOCD
Robert Hamlet, NMOCD
Jim Amos, United States Bureau of Land Management

Attachments:

Figure 1	Site Location Map
Figure 2	Preliminary Soil Sample Locations
Figure 3	Delineation Soil Sample Locations
Figure 4	Excavation Soil Sample Locations
Table 1	Soil Analytical Results
Attachment 1	Initial/Final NMOCD Form C-141 (2RP-5330)
Attachment 2	Soil Analytical Reports
Attachment 3	Photographic Log

IMAGE COURTESY OF ESRI/USGS

LEGEND

SITE LOCATION

0 2,000 4,000

Feet

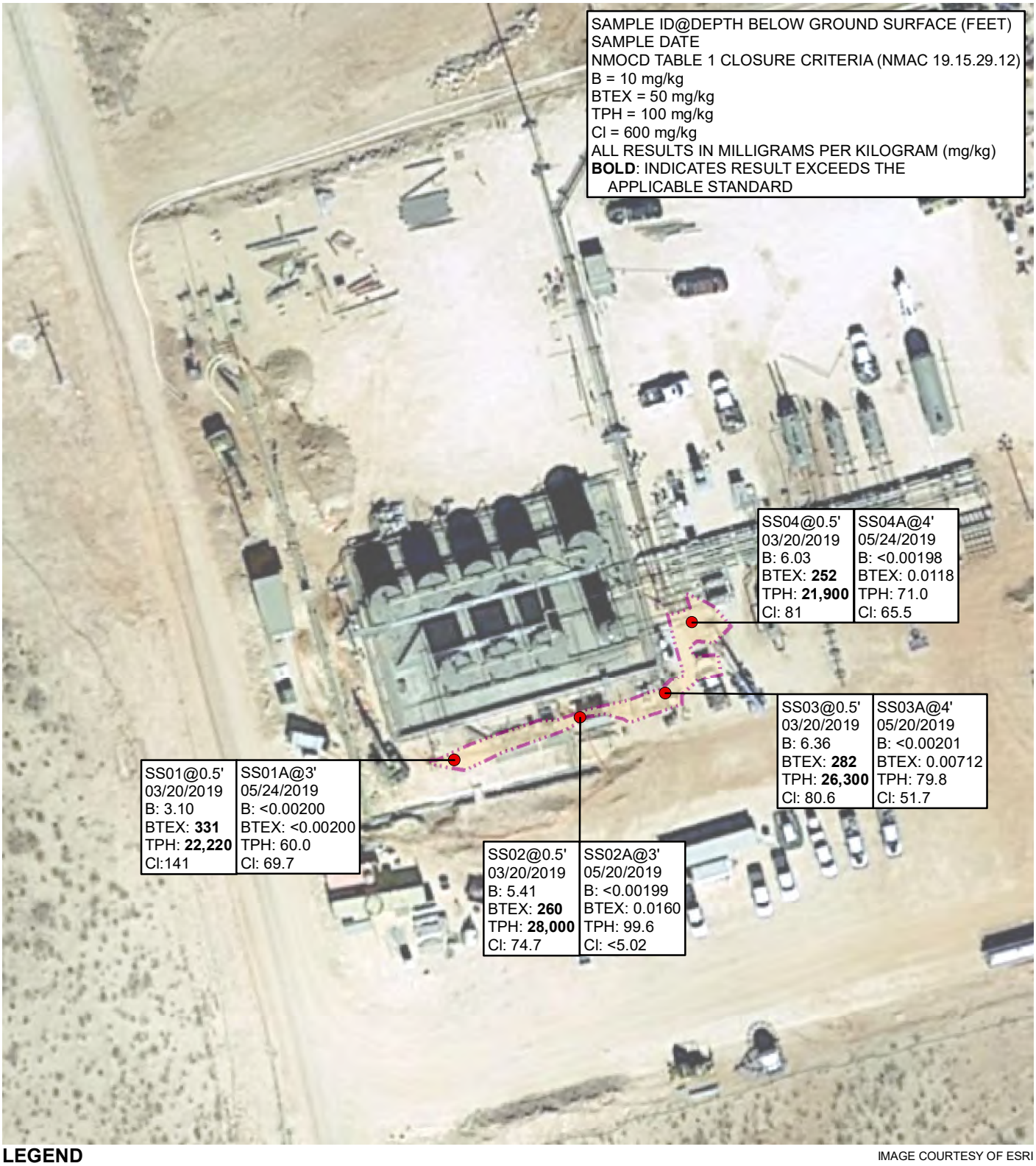
N

NEW MEXICO

NOTE: REMEDIATION PERMIT NUMBER 2RP-5330

FIGURE 1
SITE LOCATION MAP
ROSS DRAW 3031 BATTERY
UNIT H SEC 31 T26S R30E
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

P:\XTO Energy\GIS\MXD\012919047_ROSS DRAW 3031 BATTERY\012919047_FIG01_SL_2019_5330.mxd



LEGEND

SOIL SAMPLE WITH CONCENTRATIONS EXCEEDING APPLICABLE STANDARDS

RELEASE EXTENT

B: BENZENE
BTEX: TOTAL BENZENE, TOLUENE, ETHYLBENZENE, AND TOTAL XYLENES
TPH – TOTAL PETROLEUM HYDROCARBONS
Cl - CHLORIDE
NMAC – NEW MEXICO ADMINISTRATIVE CODE
NMOCD – NEW MEXICO OIL CONSERVATION DIVISION
NOTE: REMEDIATION PERMIT NUMBER 2RP-5330

IMAGE COURTESY OF ESRI

0 50 100
Feet

N

FIGURE 2
SOIL SAMPLE LOCATIONS
ROSS DRAW 3031 BATTERY
UNIT H SEC 31 T26S R30E
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

P:\XTO Energy\GIS\MXD\012919047_ROSS DRAW 3031 BATTERY\012919047_FIG02_PRELIMINARY_5330_1.mxd

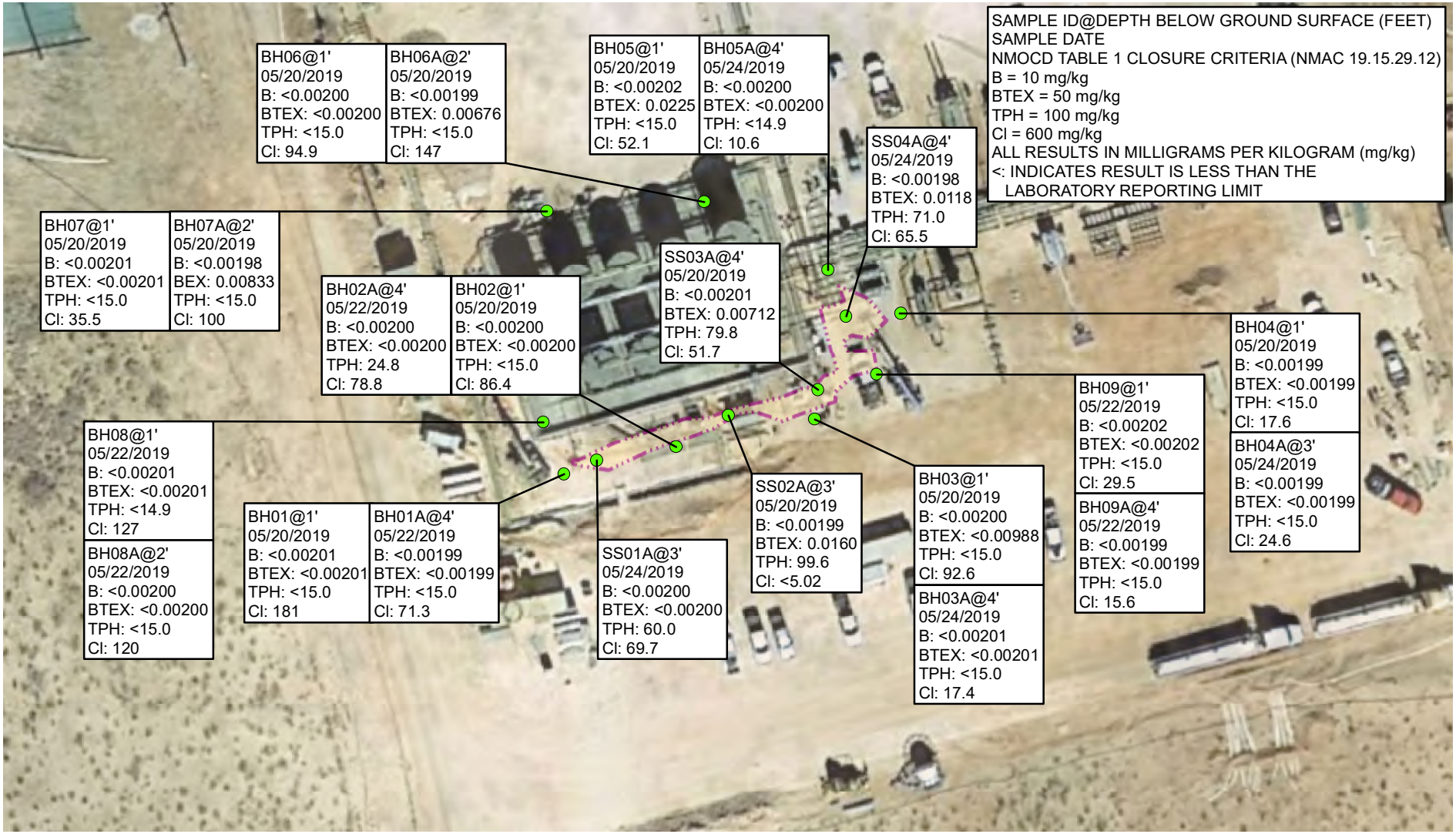


IMAGE COURTESY OF GOOGLE EARTH 2016

LEGEND

DELINEATION SOIL SAMPLE IN COMPLIANCE WITH APPLICABLE STANDARDS

RELEASE EXTENT

0 60 120
Feet

N

B: BENZENE
BTEX: TOTAL BENZENE, TOLUENE, ETHYLBENZENE, AND TOTAL XYLENES
TPH – TOTAL PETROLEUM HYDROCARBONS
Cl - CHLORIDE
NMAC – NEW MEXICO ADMINISTRATIVE CODE
NMOCD – NEW MEXICO OIL CONSERVATION DIVISION
NOTE: REMEDIATION PERMIT NUMBER 2RP-5330

FIGURE 3
DELINEATION SOIL SAMPLE LOCATIONS
ROSS DRAW 3031 BATTERY
UNIT H SEC 31 T26S R30E
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

P:\XTO Energy\GIS\MXD\012919047_ROSS DRAW 3031 BATTERY\012919047_FIG03_DELINEATION_5330_1.mxd

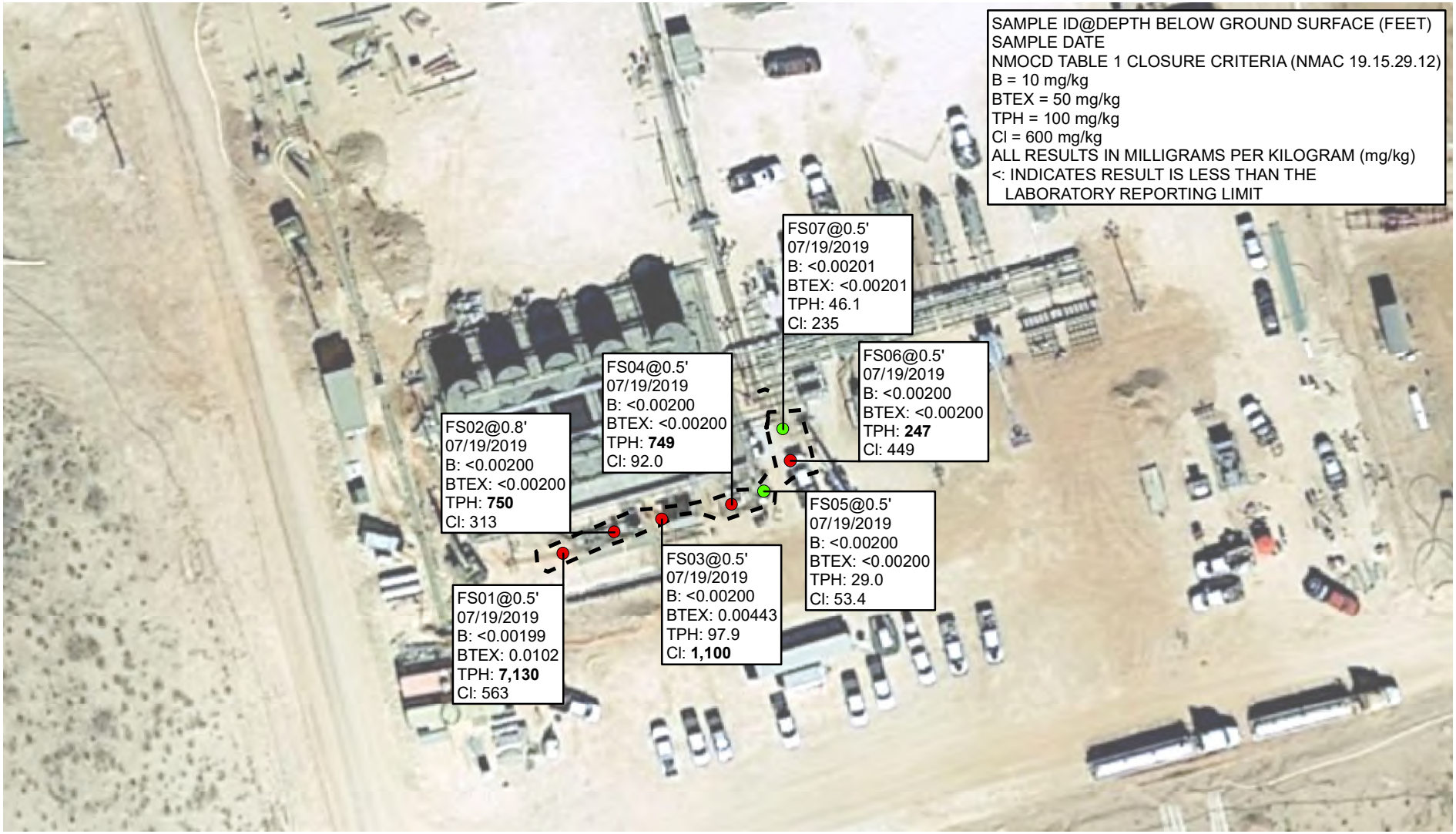


IMAGE COURTESY OF GOOGLE EARTH 2016

LEGEND

- EXCAVATION SOIL SAMPLE WITH CONCENTRATIONS EXCEEDING APPLICABLE CLOSURE CRITERIA
- EXCAVATION EXTENT
- EXCAVATION SOIL SAMPLE IN COMPLIANCE WITH APPLICABLE CLOSURE CRITERIA

B: BENZENE
BTEX: TOTAL BENZENE, TOLUENE, ETHYLBENZENE, AND TOTAL XYLENES
TPH: TOTAL PETROLEUM HYDROCARBONS
Cl: CHLORIDE
NMAC: NEW MEXICO ADMINISTRATIVE CODE
NMOCD: NEW MEXICO OIL CONSERVATION DIVISION
NOTE: REMEDIATION PERMIT NUMBER 2RP-5330

0 60 120
Feet

N

FIGURE 4
EXCAVATION SOIL SAMPLE LOCATIONS
ROSS DRAW 3031 BATTERY
UNIT H SEC 31 T26S R30E
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

P:\XTO Energy\GIS\MXD\012919047_ROSS DRAW 3031 BATTERY\012919047_FIG04_EXCAVATION_5330.mxd

TABLE 1
SOIL ANALYTICAL RESULTS

ROSS DRAW 3031 BATTERY
REMEDIATION PERMIT NUMBER 2RP-5330
EDDY COUNTY, NEW MEXICO
XTO ENERGY, INC.

Sample Name	Sample Depth (feet bgs)	Sample Date	Benzene (mg/kg)	Toluene (mg/kg)	Ethyl-benzene (mg/kg)	Total Xylenes (mg/kg)	Total BTEX (mg/kg)	GRO (mg/kg)	DRO (mg/kg)	ORO (mg/kg)	GRO+DRO (mg/kg)	TPH (mg/kg)	Chloride (mg/kg)
SS01	0.5	03/20/2019	3.10	68.4	14.5	245	**331**	10,100	11,000	1,120	21,100	**22,220**	141
SS02	0.5	03/20/2019	5.41	64.0	11.8	179	**260**	12,400	14,100	1,480	26,500	**28,000**	74.7
SS03	0.5	03/20/2019	6.36	71.3	13.4	191	**282**	12,700	12,300	1,290	25,000	**26,300**	80.6
SS04	0.5	03/20/2019	6.03	63.5	10.7	172	**252**	10,600	10,200	1,060	20,800	**21,900**	80.7
SS02A	3	05/20/2019	<0.00199	<0.00199	<0.00199	0.0160	0.0160	<15.0	99.6	<15.0	99.6	99.6	<5.02
SS03A	4	05/20/2019	<0.00201	<0.00201	<0.00201	0.00712	0.00712	<15.0	79.8	<15.0	79.8	79.8	51.7
BH01	1	05/20/2019	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<15.0	<15.0	<15.0	<15.0	<15.0	181
BH02	1	05/20/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	86.4
BH03	1	05/20/2019	<0.00200	<0.00200	<0.00200	0.00988	0.00988	<15.0	<15.0	<15.0	<15.0	<15.0	92.6
BH04	1	05/20/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	<15.0	<15.0	<15.0	<15.0	17.6
BH05	1	05/20/2019	<0.00202	<0.00202	<0.00202	0.0225	0.0225	<15.0	<15.0	<15.0	<15.0	<15.0	52.1
BH06	1	05/20/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	94.9
BH06A	2	05/20/2019	<0.00199	<0.00199	<0.00199	0.00676	0.00676	<15.0	<15.0	<15.0	<15.0	<15.0	147
BH07	1	05/20/2019	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<15.0	<15.0	<15.0	<15.0	<15.0	35.5
BH07A	2	05/20/2019	<0.00198	<0.00198	<0.00198	0.00833	0.00833	<15.0	<15.0	<15.0	<15.0	<15.0	100
BH01A	4	05/22/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	<15.0	<15.0	<15.0	<15.0	71.3
BH02A	4	05/22/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	24.8	<15.0	24.8	24.8	78.8
BH08	1	05/22/2019	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<14.9	<14.9	<14.9	<14.9	<14.9	127
BH08A	2	05/22/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	<15.0	<15.0	<15.0	<15.0	120
BH09	1	05/22/2019	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<15.0	<15.0	<15.0	<15.0	<15.0	29.5
BH09A	4	05/22/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	<15.0	<15.0	<15.0	<15.0	15.6
BH03A	4	05/24/2019	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<15.0	<15.0	<15.0	<15.0	<15.0	17.4
BH04A	3	05/24/2019	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15.0	<15.0	<15.0	<15.0	<15.0	24.6
BH05A	4	05/24/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<14.9	<14.9	<14.9	<14.9	<14.9	10.6
SS01A	3	05/24/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	60.0	<15.0	60.0	60.0	69.7
SS04A	4	05/24/2019	<0.00198	<0.00198	<0.00198	0.0118	0.0118	<14.9	71.0	<14.9	71.0	71.0	65.5
FS01	0.5	07/19/2019	<0.00199	0.00248	<0.00199	0.00773	0.0102	80.5	7050	436	7,570	**7,130**	563
FS02	0.8	07/19/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<14.9	750	62.3	812	**750**	313
FS03	0.5	07/19/2019	<0.00200	<0.00200	<0.00200	0.00443	0.00443	<15.0	97.9	17.8	116	97.9	**1,100**
FS04	0.5	07/19/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	749	42.0	791	**749**	92.0
FS05	0.5	07/19/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15.0	29.0	<15.0	29.0	29.0	53.4
FS06	0.5	07/19/2019	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<14.9	247	18.4	265	**247**	449
FS07	0.5	07/19/2019	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<15.0	46.1	<15.0	46.1	46.1	235
NMOCD Table 1 Closure Criteria			**10**	NE	NE	NE	**50**	NE	NE	NE	NE	**100**	**600**

Notes:

bgs - below ground surface
BTEX - benzene, toluene, ethylbenzene, and total xylenes
DRO - diesel range organics
GRO - gasoline range organics
mg/kg - milligrams per kilogram
ORO - motor oil range organics
NMAC - New Mexico Administrative Code
NMOCD - New Mexico Oil Conservation Division
NE - not established
Bold - indicates result exceeds the applicable regulatory standard
< - indicates result is below laboratory reporting limits
Table 1 - closure criteria for soils impacted by a release per NMAC 19.15.29 August 2018
TPH - total petroleum hydrocarbons

ATTACHMENT 1: INITIAL/FINAL NMOCD FORM C-141 (2RP-5330)

District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 S. First St., Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources Department

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-141
Revised August 24, 2018
Submit to appropriate OCD District office

Incident ID	NAB1909527986
District RP	2 2RP-5330
Facility ID	
Application ID	pAB1909527559

Release Notification

Responsible Party

Responsible Party XTO Energy	OGRID 5380
Contact Name Kyle Littrell	Contact Telephone 432-221-7331
Contact email Kyle_Littrell@xtoenergy.com	Incident # *(assigned by OCD)* NAB1909527986
Contact mailing address 522 W. Mermod, Carlsbad, NM 88220	

Location of Release Source

Latitude 32.000694° Longitude -103.915633°

(NAD 83 in decimal degrees to 5 decimal places)

Site Name Ross Draw 3031 Battery	Site Type Bulk Storage and Separation Facility
Date Release Discovered 3/10/2019	API# *(if applicable)* 30-015-45121 (RD 31 Fed WAL Com 6H)

Unit Letter	Section	Township	Range	County
H	31	26S	30E	Eddy

Surface Owner: ☐ State ☒ Federal ☐ Tribal ☐ Private (*Name:* BLM)

Nature and Volume of Release

Material(s) Released (Select all that apply and attach calculations or specific justification for the volumes provided below)

☒ Crude Oil	Volume Released (bbls) 14	Volume Recovered (bbls) 13
☐ Produced Water	Volume Released (bbls)	Volume Recovered (bbls)
	Is the concentration of total dissolved solids (TDS) in the produced water >10,000 mg/l?	☐ Yes ☐ No
☐ Condensate	Volume Released (bbls)	Volume Recovered (bbls)
☐ Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
☐ Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release

A release of fluid occurred from the suction side of the new LACT unit. The nuts were only hand tightened on one of the flanges. The nuts loosened and allowed fluid to escape. A vacuum truck recovered standing fluid from the well pad. The flange was properly tightened and the facility returned to production. Additional third party resources have been retained to assist with remediation.

State of New Mexico
Oil Conservation Division

Incident ID	NAB1909527986
District RP	2 2RP-5330
Facility ID	
Application ID	pAB1909527559

Was this a major release as defined by 19.15.29.7(A) NMAC? ☐ Yes ☒ No	If YES, for what reason(s) does the responsible party consider this a major release? N/A
If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)? N/A	

Initial Response

The responsible party must undertake the following actions immediately unless they could create a safety hazard that would result in injury

☒ The source of the release has been stopped.
☒ The impacted area has been secured to protect human health and the environment.
☒ Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices.
☒ All free liquids and recoverable materials have been removed and managed appropriately.

If all the actions described above have not been undertaken, explain why:
N/A

Per 19.15.29.8 B. (4) NMAC the responsible party may commence remediation immediately after discovery of a release. If remediation has begun, please attach a narrative of actions to date. If remedial efforts have been successfully completed or if the release occurred within a lined containment area (see 19.15.29.11(A)(5)(a) NMAC), please attach all information needed for closure evaluation.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Printed Name: Kyle Littrell Title: SH&E Supervisor

Signature: [signature] Date: 3-22-19

email: Kyle_Littrell@xtoenergy.com Telephone: 432-221-7331

OCD Only

Received by: [signature] Date: 4/5/2019

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	**2RP-5330**
Facility ID	
Application ID	

Site Assessment/Characterization

This information must be provided to the appropriate district office no later than 90 days after the release discovery date.

What is the shallowest depth to groundwater beneath the area affected by the release?	< 50 (ft bgs)
Did this release impact groundwater or surface water?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	☐ Yes ☒ No
Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	☐ Yes ☒ No
Are the lateral extents of the release within 500 horizontal feet of a spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes?	☐ Yes ☒ No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	☐ Yes ☒ No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of a wetland?	☐ Yes ☒ No
Are the lateral extents of the release overlying a subsurface mine?	☐ Yes ☒ No
Are the lateral extents of the release overlying an unstable area such as karst geology?	☒ Yes ☐ No
Are the lateral extents of the release within a 100-year floodplain?	☐ Yes ☒ No
Did the release impact areas **not** on an exploration, development, production, or storage site?	☐ Yes ☒ No

Attach a comprehensive report (electronic submittals in .pdf format are preferred) demonstrating the lateral and vertical extents of soil contamination associated with the release have been determined. Refer to 19.15.29.11 NMAC for specifics.

Characterization Report Checklist: ***Each of the following items must be included in the report.***

☒ Scaled site map showing impacted area, surface features, subsurface features, delineation points, and monitoring wells.
☒ Field data
☒ Data table of soil contaminant concentration data
☒ Depth to water determination
☒ Determination of water sources and significant watercourses within ½-mile of the lateral extents of the release
☒ Boring or excavation logs
☒ Photographs including date and GIS information
☒ Topographic/Aerial maps
☒ Laboratory data including chain of custody

If the site characterization report does not include completed efforts at remediation of the release, the report must include a proposed remediation plan. That plan must include the estimated volume of material to be remediated, the proposed remediation technique, proposed sampling plan and methods, anticipated timelines for beginning and completing the remediation. The closure criteria for a release are contained in Table 1 of 19.15.29.12 NMAC, however, use of the table is modified by site- and release-specific parameters.

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	**2RP-5330**
Facility ID	
Application ID	

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Printed Name: _____Kyle Littrell_____ Title: _____SH&E Supervisor_____

Signature:_____ Date: ____8/20/2019_____

email: _____ Kyle_Littrell@xtoenergy.com _____ Telephone: ____(432)-221-7331_____

OCD Only

Received by: _____ Date: _____

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	**2RP-5330**
Facility ID	
Application ID	

Remediation Plan

Remediation Plan Checklist: ***Each of the following items must be included in the plan.***

☐ Detailed description of proposed remediation technique
☐ Scaled sitemap with GPS coordinates showing delineation points
☐ Estimated volume of material to be remediated
☐ Closure criteria is to Table 1 specifications subject to 19.15.29.12(C)(4) NMAC
☐ Proposed schedule for remediation (note if remediation plan timeline is more than 90 days OCD approval is required)

Deferral Requests Only: ***Each of the following items must be confirmed as part of any request for deferral of remediation.***

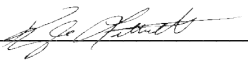
☒ Contamination must be in areas immediately under or around production equipment where remediation could cause a major facility deconstruction.

☒ Extents of contamination must be fully delineated.

☒ Contamination does not cause an imminent risk to human health, the environment, or groundwater.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Printed Name: Kyle Littrell Title: SH&E Coordinator

Signature:  Date: 8/20/2019

email: Kyle_Littrell@xtoenergy.com Telephone: 432-221-7331

OCD Only

Received by: _____ Date: _____

☐ Approved ☐ Approved with Attached Conditions of Approval ☐ Denied ☐ Deferral Approved

Signature: _____ Date: _____

Analytical Report 618605

for

LT Environmental, Inc.

Project Manager: Adrian Baker

Ross Draw 30-31

02-APR-19

Collected By: Client

1211 W. Florida Ave
Midland TX 79701

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-18-28), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)
Oklahoma (2017-142)

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (T104704295-18-17), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-18-14)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-18-18)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-18-18)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-18-4)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)
Xenco-Phoenix Mobile (EPA Lab Code: AZ00901): Arizona (AZM757)
Xenco-Atlanta (LELAP Lab ID #04176)
Xenco-Tampa: Florida (E87429), North Carolina (483)
Xenco-Lakeland: Florida (E84098)

02-APR-19

Project Manager: **Adrian Baker**
LT Environmental, Inc.
4600 W. 60th Avenue
Arvada, CO 80003

Reference: XENCO Report No(s): **618605**
Ross Draw 30-31
Project Address: ---

Adrian Baker:

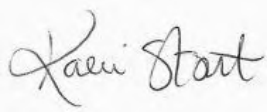
We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 618605. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. The uncertainty of measurement associated with the results of analysis reported is available upon request. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 618605 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting XENCO Laboratories to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,



Kalei Stout
Midland Laboratory Director

Sample Cross Reference 618605

LT Environmental, Inc., Arvada, CO

Ross Draw 30-31

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SS01	S	03-20-19 12:45	.5 ft	618605-001
SS02	S	03-20-19 13:00	.5 ft	618605-002
SS03	S	03-20-19 13:10	.5 ft	618605-003
SS04	S	03-20-19 13:25	.5 ft	618605-004

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3083123 TPH by SW8015 Mod

Lab Sample ID 618605-001 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD). Gasoline Range Hydrocarbons (GRO) recovered above QC limits in the Matrix Spike. Outlier/s are due to possible matrix interference. Samples in the analytical batch are: 618605-001, -002, -003, -004.
The Laboratory Control Sample for Gasoline Range Hydrocarbons (GRO) is within laboratory Control Limits, therefore the data was accepted.

Batch: LBA-3084057 BTEX by EPA 8021B

Surrogate 4-Bromofluorobenzene recovered above QC limits. Matrix interferences is suspected; data confirmed by re-analysis.
Samples affected are: 618605-001,618605-004,618605-003,618605-002.
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Certificate of Analysis Summary 618605

LT Environmental, Inc., Arvada, CO

Project Name: Ross Draw 30-31

Project Id: ---
Contact: Adrian Baker
Project Location: ---

Date Received in Lab: Fri Mar-22-19 11:55 am
Report Date: 02-APR-19
Project Manager: Kalei Stout

Analysis Requested													
	Lab Id:	618605-001		618605-002		618605-003		618605-004					
	Field Id:	SS01		SS02		SS03		SS04					
	Depth:	.5- ft		.5- ft		.5- ft		.5- ft					
	Matrix:	SOIL		SOIL		SOIL		SOIL					
	Sampled:	Mar-20-19 12:45		Mar-20-19 13:00		Mar-20-19 13:10		Mar-20-19 13:25					
BTEX by EPA 8021B	***Extracted:***	Mar-29-19 16:00		Mar-29-19 16:00		Mar-29-19 16:00		Mar-29-19 16:00					
	Analyzed:	Mar-30-19 03:14		Mar-30-19 03:33		Mar-30-19 03:52		Mar-30-19 04:11					
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL				
Benzene		3.10	2.00	5.41	2.00	6.36	2.00	6.03	1.99				
Toluene		68.4	2.00	64.0	2.00	71.3	2.00	63.5	1.99				
Ethylbenzene		14.5	2.00	11.8	2.00	13.4	2.00	10.7	1.99				
m,p-Xylenes		195	4.01	143	4.01	153	3.99	137	3.98				
o-Xylene		49.9	2.00	36.0	2.00	38.3	2.00	35.0	1.99				
Total Xylenes		245	2.00	179	2.00	191	2.00	172	1.99				
Total BTEX		331	2.00	260	2.00	282	2.00	252	1.99				
Inorganic Anions by EPA 300	***Extracted:***	Mar-23-19 18:30		Mar-23-19 18:30		Mar-23-19 18:30		Mar-23-19 18:30					
	Analyzed:	Mar-24-19 02:11		Mar-24-19 02:56		Mar-24-19 02:50		Mar-24-19 03:08					
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL				
Chloride		141	5.02	74.7	5.03	80.6	4.98	80.7	5.04				
TPH by SW8015 Mod	***Extracted:***	Mar-23-19 11:00		Mar-23-19 11:00		Mar-23-19 11:00		Mar-23-19 11:00					
	Analyzed:	Mar-24-19 12:11		Mar-24-19 13:10		Mar-24-19 13:29		Mar-24-19 13:49					
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL				
Gasoline Range Hydrocarbons (GRO)		10100	74.9	12400	74.8	12700	74.8	10600	74.7				
Diesel Range Organics (DRO)		11000	74.9	14100	74.8	12300	74.8	10200	74.7				
Motor Oil Range Hydrocarbons (MRO)		1120	74.9	1480	74.8	1290	74.8	1060	74.7				
Total TPH		22200	74.9	28000	74.8	26300	74.8	21900	74.7				

Kalei Stout
Midland Laboratory Director

Certificate of Analytical Results 618605

LT Environmental, Inc., Arvada, CO

Ross Draw 30-31

Sample Id:	**SS01**	Matrix:	Soil	Date Received:	03.22.19 11.55
Lab Sample Id:	618605-001	Date Collected:	03.20.19 12.45	Sample Depth:	.5 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	03.23.19 18.30	Basis:	Wet Weight
Seq Number:	3083132				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**141**	5.02	mg/kg	03.24.19 02.11		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	03.23.19 11.00	Basis:	Wet Weight
Seq Number:	3083123				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	**10100**	74.9	mg/kg	03.24.19 12.11		5
Diesel Range Organics (DRO)	C10C28DRO	**11000**	74.9	mg/kg	03.24.19 12.11		5
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**1120**	74.9	mg/kg	03.24.19 12.11		5
Total TPH	PHC635	**22200**	74.9	mg/kg	03.24.19 12.11		5

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	102	%	70-135	03.24.19 12.11	
o-Terphenyl	84-15-1	119	%	70-135	03.24.19 12.11	

Certificate of Analytical Results 618605

LT Environmental, Inc., Arvada, CO

Ross Draw 30-31

Sample Id:	**SS01**	Matrix:	Soil	Date Received:	03.22.19 11.55
Lab Sample Id:	618605-001	Date Collected:	03.20.19 12.45	Sample Depth:	.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	03.29.19 16.00	Basis:	Wet Weight
Seq Number:	3084057				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	**3.10**	2.00	mg/kg	03.30.19 03.14		1000
Toluene	108-88-3	**68.4**	2.00	mg/kg	03.30.19 03.14		1000
Ethylbenzene	100-41-4	**14.5**	2.00	mg/kg	03.30.19 03.14		1000
m,p-Xylenes	179601-23-1	**195**	4.01	mg/kg	03.30.19 03.14		1000
o-Xylene	95-47-6	**49.9**	2.00	mg/kg	03.30.19 03.14		1000
Total Xylenes	1330-20-7	**245**	2.00	mg/kg	03.30.19 03.14		1000
Total BTEX		**331**	2.00	mg/kg	03.30.19 03.14		1000

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	143	%	70-130	03.30.19 03.14	**
1,4-Difluorobenzene	540-36-3	99	%	70-130	03.30.19 03.14	

Certificate of Analytical Results 618605

LT Environmental, Inc., Arvada, CO

Ross Draw 30-31

Sample Id:	**SS02**	Matrix:	Soil	Date Received:	03.22.19 11.55
Lab Sample Id:	618605-002	Date Collected:	03.20.19 13.00	Sample Depth:	.5 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	03.23.19 18.30	Basis:	Wet Weight
Seq Number:	3083132				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**74.7**	5.03	mg/kg	03.24.19 02.56		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	03.23.19 11.00	Basis:	Wet Weight
Seq Number:	3083123				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	**12400**	74.8	mg/kg	03.24.19 13.10		5
Diesel Range Organics (DRO)	C10C28DRO	**14100**	74.8	mg/kg	03.24.19 13.10		5
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**1480**	74.8	mg/kg	03.24.19 13.10		5
Total TPH	PHC635	**28000**	74.8	mg/kg	03.24.19 13.10		5

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	116	%	70-135	03.24.19 13.10	
o-Terphenyl	84-15-1	84	%	70-135	03.24.19 13.10	

Certificate of Analytical Results 618605

LT Environmental, Inc., Arvada, CO

Ross Draw 30-31

Sample Id:	**SS02**	Matrix:	Soil	Date Received:	03.22.19 11.55
Lab Sample Id:	618605-002	Date Collected:	03.20.19 13.00	Sample Depth:	.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	03.29.19 16.00	Basis:	Wet Weight
Seq Number:	3084057				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	**5.41**	2.00	mg/kg	03.30.19 03.33		1000
Toluene	108-88-3	**64.0**	2.00	mg/kg	03.30.19 03.33		1000
Ethylbenzene	100-41-4	**11.8**	2.00	mg/kg	03.30.19 03.33		1000
m,p-Xylenes	179601-23-1	**143**	4.01	mg/kg	03.30.19 03.33		1000
o-Xylene	95-47-6	**36.0**	2.00	mg/kg	03.30.19 03.33		1000
Total Xylenes	1330-20-7	**179**	2.00	mg/kg	03.30.19 03.33		1000
Total BTEX		**260**	2.00	mg/kg	03.30.19 03.33		1000

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	132	%	70-130	03.30.19 03.33	**
1,4-Difluorobenzene	540-36-3	100	%	70-130	03.30.19 03.33	

Certificate of Analytical Results 618605

LT Environmental, Inc., Arvada, CO

Ross Draw 30-31

Sample Id:	**SS03**	Matrix:	Soil	Date Received:	03.22.19 11.55
Lab Sample Id:	618605-003	Date Collected:	03.20.19 13.10	Sample Depth:	.5 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	03.23.19 18.30	Basis:	Wet Weight
Seq Number:	3083132				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**80.6**	4.98	mg/kg	03.24.19 02.50		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	03.23.19 11.00	Basis:	Wet Weight
Seq Number:	3083123				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	**12700**	74.8	mg/kg	03.24.19 13.29		5
Diesel Range Organics (DRO)	C10C28DRO	**12300**	74.8	mg/kg	03.24.19 13.29		5
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**1290**	74.8	mg/kg	03.24.19 13.29		5
Total TPH	PHC635	**26300**	74.8	mg/kg	03.24.19 13.29		5

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	126	%	70-135	03.24.19 13.29	
o-Terphenyl	84-15-1	127	%	70-135	03.24.19 13.29	

Certificate of Analytical Results 618605

LT Environmental, Inc., Arvada, CO

Ross Draw 30-31

Sample Id:	**SS03**	Matrix:	Soil	Date Received:	03.22.19 11.55
Lab Sample Id:	618605-003	Date Collected:	03.20.19 13.10	Sample Depth:	.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	03.29.19 16.00	Basis:	Wet Weight
Seq Number:	3084057				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	**6.36**	2.00	mg/kg	03.30.19 03.52		1000
Toluene	108-88-3	**71.3**	2.00	mg/kg	03.30.19 03.52		1000
Ethylbenzene	100-41-4	**13.4**	2.00	mg/kg	03.30.19 03.52		1000
m,p-Xylenes	179601-23-1	**153**	3.99	mg/kg	03.30.19 03.52		1000
o-Xylene	95-47-6	**38.3**	2.00	mg/kg	03.30.19 03.52		1000
Total Xylenes	1330-20-7	**191**	2.00	mg/kg	03.30.19 03.52		1000
Total BTEX		**282**	2.00	mg/kg	03.30.19 03.52		1000

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	99	%	70-130	03.30.19 03.52	
4-Bromofluorobenzene	460-00-4	131	%	70-130	03.30.19 03.52	**

Certificate of Analytical Results 618605

LT Environmental, Inc., Arvada, CO

Ross Draw 30-31

Sample Id:	**SS04**	Matrix:	Soil	Date Received:	03.22.19 11.55
Lab Sample Id:	618605-004	Date Collected:	03.20.19 13.25	Sample Depth:	.5 ft

Analytical Method:	Inorganic Anions by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	03.23.19 18.30	Basis:	Wet Weight
Seq Number:	3083132				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**80.7**	5.04	mg/kg	03.24.19 03.08		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	03.23.19 11.00	Basis:	Wet Weight
Seq Number:	3083123				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	**10600**	74.7	mg/kg	03.24.19 13.49		5
Diesel Range Organics (DRO)	C10C28DRO	**10200**	74.7	mg/kg	03.24.19 13.49		5
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**1060**	74.7	mg/kg	03.24.19 13.49		5
Total TPH	PHC635	**21900**	74.7	mg/kg	03.24.19 13.49		5

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	99	%	70-135	03.24.19 13.49	
o-Terphenyl	84-15-1	103	%	70-135	03.24.19 13.49	

Certificate of Analytical Results 618605

LT Environmental, Inc., Arvada, CO

Ross Draw 30-31

Sample Id:	**SS04**	Matrix:	Soil	Date Received:	03.22.19 11.55
Lab Sample Id:	618605-004	Date Collected:	03.20.19 13.25	Sample Depth:	.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	03.29.19 16.00	Basis:	Wet Weight
Seq Number:	3084057				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	**6.03**	1.99	mg/kg	03.30.19 04.11		1000
Toluene	108-88-3	**63.5**	1.99	mg/kg	03.30.19 04.11		1000
Ethylbenzene	100-41-4	**10.7**	1.99	mg/kg	03.30.19 04.11		1000
m,p-Xylenes	179601-23-1	**137**	3.98	mg/kg	03.30.19 04.11		1000
o-Xylene	95-47-6	**35.0**	1.99	mg/kg	03.30.19 04.11		1000
Total Xylenes	1330-20-7	**172**	1.99	mg/kg	03.30.19 04.11		1000
Total BTEX		**252**	1.99	mg/kg	03.30.19 04.11		1000

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	132	%	70-130	03.30.19 04.11	**
1,4-Difluorobenzene	540-36-3	100	%	70-130	03.30.19 04.11	

Flagging Criteria

X In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.

B A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.

D The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.

E The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.

F RPD exceeded lab control limits.

J The target analyte was positively identified below the quantitation limit and above the detection limit.

U Analyte was not detected.

L The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.

H The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.

K Sample analyzed outside of recommended hold time.

JN A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

MDL Method Detection Limit **SDL** Sample Detection Limit **LOD** Limit of Detection

PQL Practical Quantitation Limit **MQL** Method Quantitation Limit **LOQ** Limit of Quantitation

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

BKS/LCS Blank Spike/Laboratory Control Sample **BKSD/LCSD** Blank Spike Duplicate/Laboratory Control Sample Duplicate

MD/SD Method Duplicate/Sample Duplicate **MS** Matrix Spike **MSD:** Matrix Spike Duplicate

+ NELAC certification not offered for this compound.

***** (Next to analyte name or method description) = Outside XENCO's scope of NELAC accreditation

QC Summary 618605

LT Environmental, Inc.

Ross Draw 30-31

Analytical Method: **Inorganic Anions by EPA 300** Prep Method: E300P
Seq Number: 3083132 Matrix: Solid Date Prep: 03.23.19
MB Sample Id: 7674205-1-BLK LCS Sample Id: 7674205-1-BKS LCSD Sample Id: 7674205-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<5.00	250	253	101	250	100	90-110	1	20	mg/kg	03.24.19 00:40	

Analytical Method: **Inorganic Anions by EPA 300** Prep Method: E300P
Seq Number: 3083132 Matrix: Soil Date Prep: 03.23.19
Parent Sample Id: 618581-004 MS Sample Id: 618581-004 S MSD Sample Id: 618581-004 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	43.2	248	287	98	292	100	90-110	2	20	mg/kg	03.24.19 00:57	

Analytical Method: **Inorganic Anions by EPA 300** Prep Method: E300P
Seq Number: 3083132 Matrix: Soil Date Prep: 03.23.19
Parent Sample Id: 618605-001 MS Sample Id: 618605-001 S MSD Sample Id: 618605-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	141	251	388	98	398	102	90-110	3	20	mg/kg	03.24.19 02:16	

Analytical Method: **TPH by SW8015 Mod** Prep Method: TX1005P
Seq Number: 3083123 Matrix: Solid Date Prep: 03.23.19
MB Sample Id: 7674187-1-BLK LCS Sample Id: 7674187-1-BKS LCSD Sample Id: 7674187-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<8.00	1000	1060	106	1010	101	70-135	5	20	mg/kg	03.23.19 17:56	
Diesel Range Organics (DRO)	<8.13	1000	1160	116	1090	109	70-135	6	20	mg/kg	03.23.19 17:56	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	119		120		128		70-135	%	03.23.19 17:56
o-Terphenyl	121		118		114		70-135	%	03.23.19 17:56

MS/MSD Percent Recovery [D] = 100*(C-A) / B LCS = Laboratory Control Sample MS = Matrix Spike
Relative Percent Difference RPD = 200* | (C-E) / (C+E) | A = Parent Result B = Spike Added
LCS/LCSD Recovery [D] = 100 * (C) / [B] C = MS/LCS Result D = MSD/LCSD % Rec
Log Difference Log Diff. = Log(Sample Duplicate) - Log(Original Sample) E = MSD/LCSD Result

QC Summary 618605

LT Environmental, Inc.

Ross Draw 30-31

Analytical Method: **TPH by SW8015 Mod** Prep Method: TX1005P
Seq Number: 3083123 Matrix: Soil Date Prep: 03.23.19
Parent Sample Id: 618605-001 MS Sample Id: 618605-001 S MSD Sample Id: 618605-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	10100	1000	11700	160	11300	120	70-135	3	20	mg/kg	03.24.19 12:31	X
Diesel Range Organics (DRO)	11000	1000	12200	120	12000	100	70-135	2	20	mg/kg	03.24.19 12:31	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	105		120		70-135	%	03.24.19 12:31
o-Terphenyl	127		127		70-135	%	03.24.19 12:31

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B
Seq Number: 3084057 Matrix: Solid Date Prep: 03.29.19
MB Sample Id: 7674756-1-BLK LCS Sample Id: 7674756-1-BKS LCSD Sample Id: 7674756-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.000383	0.0994	0.102	103	0.101	101	70-130	1	35	mg/kg	03.29.19 19:23	
Toluene	<0.000453	0.0994	0.105	106	0.104	104	70-130	1	35	mg/kg	03.29.19 19:23	
Ethylbenzene	<0.000561	0.0994	0.0998	100	0.0991	99	70-130	1	35	mg/kg	03.29.19 19:23	
m,p-Xylenes	<0.00101	0.199	0.202	102	0.202	101	70-130	0	35	mg/kg	03.29.19 19:23	
o-Xylene	<0.000342	0.0994	0.102	103	0.103	103	70-130	1	35	mg/kg	03.29.19 19:23	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	91		98		101		70-130	%	03.29.19 19:23
4-Bromofluorobenzene	86		94		107		70-130	%	03.29.19 19:23

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B
Seq Number: 3084057 Matrix: Soil Date Prep: 03.29.19
Parent Sample Id: 618714-015 MS Sample Id: 618714-015 S MSD Sample Id: 618714-015 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.000383	0.0996	0.0799	80	0.0886	89	70-130	10	35	mg/kg	03.29.19 20:01	
Toluene	<0.000454	0.0996	0.0809	81	0.0906	91	70-130	11	35	mg/kg	03.29.19 20:01	
Ethylbenzene	<0.000563	0.0996	0.0726	73	0.0836	84	70-130	14	35	mg/kg	03.29.19 20:01	
m,p-Xylenes	<0.00101	0.199	0.146	73	0.169	85	70-130	15	35	mg/kg	03.29.19 20:01	
o-Xylene	<0.000343	0.0996	0.0745	75	0.0863	87	70-130	15	35	mg/kg	03.29.19 20:01	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	101		101		70-130	%	03.29.19 20:01
4-Bromofluorobenzene	107		106		70-130	%	03.29.19 20:01

MS/MSD Percent Recovery [D] = 100*(C-A) / B LCS = Laboratory Control Sample MS = Matrix Spike
Relative Percent Difference RPD = 200* | (C-E) / (C+E) | A = Parent Result B = Spike Added
LCS/LCSD Recovery [D] = 100 * (C) / [B] C = MS/LCS Result D = MSD/LCSD % Rec
Log Difference Log Diff. = Log(Sample Duplicate) - Log(Original Sample) E = MSD/LCSD Result

Chain of Custody

XENCO LABORATORIES

Houston,TX (281) 240-4200 Dallas,TX (214) 902-0300 San Antonio,TX (210) 509-3334
Midland,TX (432-704-5440) EL Paso,TX (915)585-3443 Lubbock,TX (806)794-1296
Hobbs,NM (575-392-7550) Phoenix,AZ (480-355-0900) Atlanta,GA (770-449-8800) Tampa,FL (813-620-2000)

Work Order No: 619005

www.xenco.com Page 1 of 1

Project Manager:	Adrian Baker	Bill to: (if different)	Kyle Littrell
Company Name:	LT Environmental, Inc., Permian office	Company Name:	XTO
Address:	3300 North A Street	Address:	
City, State ZIP:	Midland, TX 79705	City, State ZIP:	
Phone:	432.704.5178	Email:	bgreen@LTenv.com/Abaker@LTenv.com

Work Order Comments

Program: UST/PST ☐ RP ☐ Brownfields ☐ RC ☐ Superfund ☐
State of Project:
Reporting: Level II ☐ Level III ☐ ST/UST ☐ RP ☐ Level IV ☐
Deliverables: EDD ☐ ADaPT ☐ Other:

Project Name:	Ross Draw 30-31	Turn Around	
Project Number:		Routine	☑
P.O. Number:	3/10/2019	Rush:	
Sampler's Name:	Garrett Green	Due Date:	

SAMPLE RECEIPT			
Temperature (°C):	0.3 / 0.2	Temp Blank:	Yes (No)
Received Intact:	(Yes) No	Wet Ice:	(Yes) No
Cooler Custody Seals:	Yes (No) N/A	Thermometer ID:	1E
Sample Custody Seals:	Yes No N/A	Correction Factor:	-0.1
		Total Containers:	

Work Order Notes

32.001410, -103.914527

TAT starts the day recevied by the lab, if received by 4:30pm

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 8021)	Chloride (EPA 300.0)	Sample Comments
SS01	S	3/10/19	1245	.5'	1	X	X	X	
SS02	S		1300		1	X	X	X	
SS03	S		1310		1	X	X	X	
SS04	S		1325		1	X	X	X	

Total 200.7 / 6010 200.8 / 6020: 8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO2 Na Sr Tl Sn U V Zn

Circle Method(s) and Metal(s) to be analyzed **TCLP / SPLP 6010**: 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Tl U **1631 / 245.1 / 7470 / 7471** : Hg

	Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1			3/19/19 - 1900	2		
3			3/22/19 1155	4		
5				6		

Revised Date 051418 Rev. 2018.1

Final 1.000

Page 17 of 18

XENCO Laboratories
Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 03/22/2019 11:55:00 AM

Work Order #: 618605

Acceptable Temperature Range: 0 - 6 degC
Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : R8

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	.2
#2 *Shipping container in good condition?	**Yes**
#3 *Samples received on ice?	**Yes**
#4 *Custody Seals intact on shipping container/ cooler?	**N/A**
#5 Custody Seals intact on sample bottles?	**N/A**
#6*Custody Seals Signed and dated?	**N/A**
#7 *Chain of Custody present?	**Yes**
#8 Any missing/extra samples?	**No**
#9 Chain of Custody signed when relinquished/ received?	**Yes**
#10 Chain of Custody agrees with sample labels/matrix?	**Yes**
#11 Container label(s) legible and intact?	**Yes**
#12 Samples in proper container/ bottle?	**Yes**
#13 Samples properly preserved?	**Yes**
#14 Sample container(s) intact?	**Yes**
#15 Sufficient sample amount for indicated test(s)?	**Yes**
#16 All samples received within hold time?	**Yes**
#17 Subcontract of sample(s)?	**N/A**
#18 Water VOC samples have zero headspace?	**N/A**

*** Must be completed for after-hours delivery of samples prior to placing in the refrigerator**

Analyst: PH Device/Lot#:

Checklist completed by: Brianna Teel Date: 03/22/2019
Brianna Teel

Checklist reviewed by: Jessica Kramer Date: 03/22/2019
Jessica Kramer

Analytical Report 625759

for

LT Environmental, Inc.

Project Manager: Dan Moir

Ross Draw 30-31

30-MAY-19

Collected By: Client

1211 W. Florida Ave
Midland TX 79701

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-19-29), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)
Oklahoma (2017-142)

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (T104704295-19-19), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-18-14)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-19-20)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-18-18)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-18-4)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)
Xenco-Atlanta (LELAP Lab ID #04176)
Xenco-Tampa: Florida (E87429), North Carolina (483)

30-MAY-19

Project Manager: **Dan Moir**
LT Environmental, Inc.
4600 W. 60th Avenue
Arvada, CO 80003

Reference: XENCO Report No(s): **625759**
Ross Draw 30-31
Project Address: ---

Dan Moir:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 625759. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. The uncertainty of measurement associated with the results of analysis reported is available upon request. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 625759 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting XENCO Laboratories to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

Jessica Kramer

Jessica Kramer
Project Assistant

Sample Cross Reference 625759

LT Environmental, Inc., Arvada, CO

Ross Draw 30-31

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
BH01	S	05-20-19 12:25	1 ft	625759-001
BH01A	S	05-22-19 09:00	4 ft	625759-002
BH02	S	05-20-19 12:40	1 ft	625759-003
BH02A	S	05-22-19 09:25	4 ft	625759-004
BH03	S	05-20-19 12:55	1 ft	625759-005
BH03A	S	05-24-19 10:30	4 ft	625759-006
BH04	S	05-20-19 13:10	1 ft	625759-007
BH04A	S	05-24-19 10:45	3 ft	625759-008
BH05	S	05-20-19 13:25	1 ft	625759-009
BH05A	S	05-24-19 11:45	4 ft	625759-010
BH06	S	05-20-19 13:40	1 ft	625759-011
BH06A	S	05-20-19 13:45	2 ft	625759-012
BH07	S	05-20-19 13:55	1 ft	625759-013
BH07A	S	05-20-19 14:00	2 ft	625759-014
BH08	S	05-22-19 09:40	1 ft	625759-015
BH08A	S	05-22-19 09:45	2 ft	625759-016
BH09	S	05-22-19 08:15	1 ft	625759-017
BH09A	S	05-22-19 08:40	4 ft	625759-018

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3090589 BTEX by EPA 8021B

Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Certificate of Analysis Summary 625759

LT Environmental, Inc., Arvada, CO

Project Name: Ross Draw 30-31

Project Id: ---
Contact: Dan Moir
Project Location: ---

Date Received in Lab: Wed May-29-19 12:15 pm
Report Date: 30-MAY-19
Project Manager: Jessica Kramer

Analysis Requested													
	Lab Id:	625759-001		625759-002		625759-003		625759-004		625759-005		625759-006	
	Field Id:	BH01		BH01A		BH02		BH02A		BH03		BH03A	
	Depth:	1- ft		4- ft		1- ft		4- ft		1- ft		4- ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	May-20-19 12:25		May-22-19 09:00		May-20-19 12:40		May-22-19 09:25		May-20-19 12:55		May-24-19 10:30	
BTEX by EPA 8021B	***Extracted:***	May-29-19 13:00		May-29-19 13:00		May-29-19 13:00		May-29-19 13:00		May-29-19 13:00		May-29-19 13:00	
	Analyzed:	May-29-19 23:24		May-29-19 23:43		May-30-19 00:02		May-30-19 00:21		May-30-19 00:40		May-30-19 00:59	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		<0.00201	0.00201	<0.00199	0.00199	<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200	<0.00201	0.00201
Toluene		<0.00201	0.00201	<0.00199	0.00199	<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200	<0.00201	0.00201
Ethylbenzene		<0.00201	0.00201	<0.00199	0.00199	<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200	<0.00201	0.00201
m,p-Xylenes		<0.00402	0.00402	<0.00398	0.00398	<0.00400	0.00400	<0.00401	0.00401	0.00686	0.00399	<0.00402	0.00402
o-Xylene		<0.00201	0.00201	<0.00199	0.00199	<0.00200	0.00200	<0.00200	0.00200	0.00302	0.00200	<0.00201	0.00201
Total Xylenes		<0.00201	0.00201	<0.00199	0.00199	<0.00200	0.00200	<0.00200	0.00200	0.00988	0.00200	<0.00201	0.00201
Total BTEX		<0.00201	0.00201	<0.00199	0.00199	<0.00200	0.00200	<0.00200	0.00200	0.00988	0.00200	<0.00201	0.00201
Chloride by EPA 300	***Extracted:***	** ** ** **		** ** ** **		** ** ** **		** ** ** **		** ** ** **		** ** ** **	
	Analyzed:	May-29-19 15:10		May-29-19 18:34		May-29-19 15:24		May-29-19 18:42		May-29-19 15:53		May-29-19 16:01	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		181	4.99	71.3	4.97	86.4	4.95	78.8	5.03	92.6	5.01	17.4	5.00
TPH by SW8015 Mod	***Extracted:***	** ** ** **		** ** ** **		** ** ** **		** ** ** **		** ** ** **		** ** ** **	
	Analyzed:	May-29-19 13:41		May-29-19 14:40		May-29-19 14:59		May-29-19 15:19		May-29-19 15:38		May-29-19 15:58	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0
Diesel Range Organics (DRO)		<15.0	15.0	<15.0	15.0	<15.0	15.0	24.8	15.0	<15.0	15.0	<15.0	15.0
Motor Oil Range Hydrocarbons (MRO)		<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0
Total TPH		<15.0	15.0	<15.0	15.0	<15.0	15.0	24.8	15.0	<15.0	15.0	<15.0	15.0
Total GRO-DRO		<15.0	15.0	<15.0	15.0	<15.0	15.0	24.8	15.0	<15.0	15.0	<15.0	15.0

Certificate of Analysis Summary 625759

LT Environmental, Inc., Arvada, CO

Project Name: Ross Draw 30-31

Project Id: ---
Contact: Dan Moir
Project Location: ---

Date Received in Lab: Wed May-29-19 12:15 pm
Report Date: 30-MAY-19
Project Manager: Jessica Kramer

Analysis Requested													
	Lab Id:	625759-007		625759-008		625759-009		625759-010		625759-011		625759-012	
	Field Id:	BH04		BH04A		BH05		BH05A		BH06		BH06A	
	Depth:	1- ft		3- ft		1- ft		4- ft		1- ft		2- ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	May-20-19 13:10		May-24-19 10:45		May-20-19 13:25		May-24-19 11:45		May-20-19 13:40		May-20-19 13:45	
BTEX by EPA 8021B	***Extracted:***	May-29-19 13:00		May-29-19 13:00		May-29-19 13:00		May-29-19 13:00		May-29-19 13:00		May-29-19 13:00	
	Analyzed:	May-30-19 01:18		May-30-19 01:37		May-30-19 01:56		May-30-19 02:15		May-30-19 03:29		May-30-19 03:48	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		<0.00199	0.00199	<0.00199	0.00199	<0.00202	0.00202	<0.00200	0.00200	<0.00200	0.00200	<0.00199	0.00199
Toluene		<0.00199	0.00199	<0.00199	0.00199	<0.00202	0.00202	<0.00200	0.00200	<0.00200	0.00200	<0.00199	0.00199
Ethylbenzene		<0.00199	0.00199	<0.00199	0.00199	<0.00202	0.00202	<0.00200	0.00200	<0.00200	0.00200	<0.00199	0.00199
m,p-Xylenes		<0.00398	0.00398	<0.00398	0.00398	0.0167	0.00403	<0.00400	0.00400	<0.00401	0.00401	0.00466	0.00398
o-Xylene		<0.00199	0.00199	<0.00199	0.00199	0.00578	0.00202	<0.00200	0.00200	<0.00200	0.00200	0.00210	0.00199
Total Xylenes		<0.00199	0.00199	<0.00199	0.00199	0.0225	0.00202	<0.00200	0.00200	<0.00200	0.00200	0.00676	0.00199
Total BTEX		<0.00199	0.00199	<0.00199	0.00199	0.0225	0.00202	<0.00200	0.00200	<0.00200	0.00200	0.00676	0.00199
Chloride by EPA 300	***Extracted:***	** ** ** **		** ** ** **		** ** ** **		** ** ** **		** ** ** **		** ** ** **	
	Analyzed:	May-29-19 14:48		May-29-19 16:08		May-29-19 16:53		May-29-19 18:49		May-29-19 16:22		May-29-19 17:14	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		17.6	5.00	24.6	5.01	52.1	5.02	10.6	5.01	94.9	5.01	147	5.02
TPH by SW8015 Mod	***Extracted:***	** ** ** **		** ** ** **		** ** ** **		** ** ** **		** ** ** **		** ** ** **	
	Analyzed:	May-29-19 16:17		May-29-19 16:36		May-29-19 16:56		May-29-19 17:15		May-29-19 17:54		May-29-19 18:13	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		<15.0	15.0	<15.0	15.0	<15.0	15.0	<14.9	14.9	<15.0	15.0	<15.0	15.0
Diesel Range Organics (DRO)		<15.0	15.0	<15.0	15.0	<15.0	15.0	<14.9	14.9	<15.0	15.0	<15.0	15.0
Motor Oil Range Hydrocarbons (MRO)		<15.0	15.0	<15.0	15.0	<15.0	15.0	<14.9	14.9	<15.0	15.0	<15.0	15.0
Total TPH		<15.0	15.0	<15.0	15.0	<15.0	15.0	<14.9	14.9	<15.0	15.0	<15.0	15.0
Total GRO-DRO		<15.0	15.0	<15.0	15.0	<15.0	15.0	<14.9	14.9	<15.0	15.0	<15.0	15.0

Certificate of Analysis Summary 625759

LT Environmental, Inc., Arvada, CO

Project Name: Ross Draw 30-31

Project Id: ---
Contact: Dan Moir
Project Location: ---

Date Received in Lab: Wed May-29-19 12:15 pm
Report Date: 30-MAY-19
Project Manager: Jessica Kramer

Analysis Requested													
	Lab Id:	625759-013		625759-014		625759-015		625759-016		625759-017		625759-018	
	Field Id:	BH07		BH07A		BH08		BH08A		BH09		BH09A	
	Depth:	1- ft		2- ft		1- ft		2- ft		1- ft		4- ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	May-20-19 13:55		May-20-19 14:00		May-22-19 09:40		May-22-19 09:45		May-22-19 08:15		May-22-19 08:40	
BTEX by EPA 8021B	***Extracted:***	May-29-19 13:00		May-29-19 13:00		May-29-19 13:00		May-29-19 13:00		May-29-19 13:00		May-29-19 13:00	
	Analyzed:	May-30-19 04:07		May-30-19 04:26		May-30-19 04:45		May-30-19 05:04		May-30-19 05:23		May-30-19 05:42	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		<0.00201	0.00201	<0.00198	0.00198	<0.00201	0.00201	<0.00200	0.00200	<0.00202	0.00202	<0.00199	0.00199
Toluene		<0.00201	0.00201	<0.00198	0.00198	<0.00201	0.00201	<0.00200	0.00200	<0.00202	0.00202	<0.00199	0.00199
Ethylbenzene		<0.00201	0.00201	<0.00198	0.00198	<0.00201	0.00201	<0.00200	0.00200	<0.00202	0.00202	<0.00199	0.00199
m,p-Xylenes		<0.00402	0.00402	0.00585	0.00397	<0.00402	0.00402	<0.00399	0.00399	<0.00403	0.00403	<0.00398	0.00398
o-Xylene		<0.00201	0.00201	0.00248	0.00198	<0.00201	0.00201	<0.00200	0.00200	<0.00202	0.00202	<0.00199	0.00199
Total Xylenes		<0.00201	0.00201	0.00833	0.00198	<0.00201	0.00201	<0.00200	0.00200	<0.00202	0.00202	<0.00199	0.00199
Total BTEX		<0.00201	0.00201	0.00833	0.00198	<0.00201	0.00201	<0.00200	0.00200	<0.00202	0.00202	<0.00199	0.00199
Chloride by EPA 300	***Extracted:***	** ** ** **		** ** ** **		** ** ** **		** ** ** **		** ** ** **		** ** ** **	
	Analyzed:	May-29-19 17:22		May-29-19 17:43		May-29-19 17:51		May-29-19 17:58		May-29-19 18:05		May-29-19 18:12	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		35.5	5.00	100	5.02	127	5.00	120	5.03	29.5	4.97	15.6	5.04
TPH by SW8015 Mod	***Extracted:***	** ** ** **		** ** ** **		** ** ** **		** ** ** **		** ** ** **		** ** ** **	
	Analyzed:	May-29-19 18:32		May-29-19 18:52		May-29-19 19:11		May-29-19 19:30		May-29-19 19:49		May-29-19 20:09	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		<15.0	15.0	<15.0	15.0	<14.9	14.9	<15.0	15.0	<15.0	15.0	<15.0	15.0
Diesel Range Organics (DRO)		<15.0	15.0	<15.0	15.0	<14.9	14.9	<15.0	15.0	<15.0	15.0	<15.0	15.0
Motor Oil Range Hydrocarbons (MRO)		<15.0	15.0	<15.0	15.0	<14.9	14.9	<15.0	15.0	<15.0	15.0	<15.0	15.0
Total TPH		<15.0	15.0	<15.0	15.0	<14.9	14.9	<15.0	15.0	<15.0	15.0	<15.0	15.0
Total GRO-DRO		<15.0	15.0	<15.0	15.0	<14.9	14.9	<15.0	15.0	<15.0	15.0	<15.0	15.0

Certificate of Analytical Results 625759

LT Environmental, Inc., Arvada, CO

Ross Draw 30-31

Sample Id:	**BH01**	Matrix:	Soil	Date Received:	05.29.19 12.15
Lab Sample Id:	625759-001	Date Collected:	05.20.19 12.25	Sample Depth:	1 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	SPC			% Moisture:	
Analyst:	SPC	Date Prep:	05.29.19 12.00	Basis:	Wet Weight
Seq Number:	3090535				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**181**	4.99	mg/kg	05.29.19 15.10		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	05.29.19 11.00	Basis:	Wet Weight
Seq Number:	3090586				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	05.29.19 13.41	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	05.29.19 13.41	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	05.29.19 13.41	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	05.29.19 13.41	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	05.29.19 13.41	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	93	%	70-135	05.29.19 13.41	
o-Terphenyl	84-15-1	93	%	70-135	05.29.19 13.41	

Certificate of Analytical Results 625759

LT Environmental, Inc., Arvada, CO

Ross Draw 30-31

Sample Id:	**BH01**	Matrix:	Soil	Date Received:	05.29.19 12.15
Lab Sample Id:	625759-001	Date Collected:	05.20.19 12.25	Sample Depth:	1 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	05.29.19 13.00	Basis:	Wet Weight
Seq Number:	3090589				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	05.29.19 23.24	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	05.29.19 23.24	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	05.29.19 23.24	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	05.29.19 23.24	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	05.29.19 23.24	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	05.29.19 23.24	U	1
Total BTEX		<0.00201	0.00201	mg/kg	05.29.19 23.24	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	95	%	70-130	05.29.19 23.24	
4-Bromofluorobenzene	460-00-4	114	%	70-130	05.29.19 23.24	

Certificate of Analytical Results 625759

LT Environmental, Inc., Arvada, CO

Ross Draw 30-31

Sample Id:	**BH01A**	Matrix:	Soil	Date Received:	05.29.19 12.15
Lab Sample Id:	625759-002	Date Collected:	05.22.19 09.00	Sample Depth:	4 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	SPC			% Moisture:	
Analyst:	SPC	Date Prep:	05.29.19 12.00	Basis:	Wet Weight
Seq Number:	3090535				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**71.3**	4.97	mg/kg	05.29.19 18.34		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	05.29.19 11.00	Basis:	Wet Weight
Seq Number:	3090586				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	05.29.19 14.40	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	05.29.19 14.40	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	05.29.19 14.40	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	05.29.19 14.40	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	05.29.19 14.40	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	94	%	70-135	05.29.19 14.40	
o-Terphenyl	84-15-1	93	%	70-135	05.29.19 14.40	

Certificate of Analytical Results 625759

LT Environmental, Inc., Arvada, CO

Ross Draw 30-31

Sample Id:	**BH01A**	Matrix:	Soil	Date Received:	05.29.19 12.15
Lab Sample Id:	625759-002	Date Collected:	05.22.19 09.00	Sample Depth:	4 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	05.29.19 13.00	Basis:	Wet Weight
Seq Number:	3090589				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	05.29.19 23.43	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	05.29.19 23.43	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	05.29.19 23.43	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	05.29.19 23.43	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	05.29.19 23.43	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	05.29.19 23.43	U	1
Total BTEX		<0.00199	0.00199	mg/kg	05.29.19 23.43	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	122	%	70-130	05.29.19 23.43	
1,4-Difluorobenzene	540-36-3	95	%	70-130	05.29.19 23.43	

Certificate of Analytical Results 625759

LT Environmental, Inc., Arvada, CO

Ross Draw 30-31

Sample Id:	**BH02**	Matrix:	Soil	Date Received:	05.29.19 12.15
Lab Sample Id:	625759-003	Date Collected:	05.20.19 12.40	Sample Depth:	1 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	SPC			% Moisture:	
Analyst:	SPC	Date Prep:	05.29.19 12.00	Basis:	Wet Weight
Seq Number:	3090535				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**86.4**	4.95	mg/kg	05.29.19 15.24		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	05.29.19 11.00	Basis:	Wet Weight
Seq Number:	3090586				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	05.29.19 14.59	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	05.29.19 14.59	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	05.29.19 14.59	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	05.29.19 14.59	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	05.29.19 14.59	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	101	%	70-135	05.29.19 14.59	
o-Terphenyl	84-15-1	101	%	70-135	05.29.19 14.59	

Certificate of Analytical Results 625759

LT Environmental, Inc., Arvada, CO

Ross Draw 30-31

Sample Id:	**BH02**	Matrix:	Soil	Date Received:	05.29.19 12.15
Lab Sample Id:	625759-003	Date Collected:	05.20.19 12.40	Sample Depth:	1 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	05.29.19 13.00	Basis:	Wet Weight
Seq Number:	3090589				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	05.30.19 00.02	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	05.30.19 00.02	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	05.30.19 00.02	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	05.30.19 00.02	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	05.30.19 00.02	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	05.30.19 00.02	U	1
Total BTEX		<0.00200	0.00200	mg/kg	05.30.19 00.02	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	117	%	70-130	05.30.19 00.02	
1,4-Difluorobenzene	540-36-3	97	%	70-130	05.30.19 00.02	

Certificate of Analytical Results 625759

LT Environmental, Inc., Arvada, CO

Ross Draw 30-31

Sample Id:	**BH02A**	Matrix:	Soil	Date Received:	05.29.19 12.15
Lab Sample Id:	625759-004	Date Collected:	05.22.19 09.25	Sample Depth:	4 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	SPC			% Moisture:	
Analyst:	SPC	Date Prep:	05.29.19 12.00	Basis:	Wet Weight
Seq Number:	3090535				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**78.8**	5.03	mg/kg	05.29.19 18.42		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	05.29.19 11.00	Basis:	Wet Weight
Seq Number:	3090586				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	05.29.19 15.19	U	1
Diesel Range Organics (DRO)	C10C28DRO	**24.8**	15.0	mg/kg	05.29.19 15.19		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	05.29.19 15.19	U	1
Total TPH	PHC635	**24.8**	15.0	mg/kg	05.29.19 15.19		1
Total GRO-DRO	PHC628	**24.8**	15.0	mg/kg	05.29.19 15.19		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	95	%	70-135	05.29.19 15.19	
o-Terphenyl	84-15-1	94	%	70-135	05.29.19 15.19	

Certificate of Analytical Results 625759

LT Environmental, Inc., Arvada, CO

Ross Draw 30-31

Sample Id:	**BH02A**	Matrix:	Soil	Date Received:	05.29.19 12.15
Lab Sample Id:	625759-004	Date Collected:	05.22.19 09.25	Sample Depth:	4 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	05.29.19 13.00	Basis:	Wet Weight
Seq Number:	3090589				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	05.30.19 00.21	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	05.30.19 00.21	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	05.30.19 00.21	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	05.30.19 00.21	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	05.30.19 00.21	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	05.30.19 00.21	U	1
Total BTEX		<0.00200	0.00200	mg/kg	05.30.19 00.21	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	96	%	70-130	05.30.19 00.21	
4-Bromofluorobenzene	460-00-4	118	%	70-130	05.30.19 00.21	

Certificate of Analytical Results 625759

LT Environmental, Inc., Arvada, CO

Ross Draw 30-31

Sample Id:	**BH03**	Matrix:	Soil	Date Received:	05.29.19 12.15
Lab Sample Id:	625759-005	Date Collected:	05.20.19 12.55	Sample Depth:	1 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	SPC			% Moisture:	
Analyst:	SPC	Date Prep:	05.29.19 12.00	Basis:	Wet Weight
Seq Number:	3090535				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**92.6**	5.01	mg/kg	05.29.19 15.53		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	05.29.19 11.00	Basis:	Wet Weight
Seq Number:	3090586				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	05.29.19 15.38	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	05.29.19 15.38	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	05.29.19 15.38	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	05.29.19 15.38	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	05.29.19 15.38	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	96	%	70-135	05.29.19 15.38	
o-Terphenyl	84-15-1	94	%	70-135	05.29.19 15.38	

Certificate of Analytical Results 625759

LT Environmental, Inc., Arvada, CO

Ross Draw 30-31

Sample Id:	**BH03**	Matrix:	Soil	Date Received:	05.29.19 12.15
Lab Sample Id:	625759-005	Date Collected:	05.20.19 12.55	Sample Depth:	1 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	05.29.19 13.00	Basis:	Wet Weight
Seq Number:	3090589				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	05.30.19 00.40	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	05.30.19 00.40	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	05.30.19 00.40	U	1
m,p-Xylenes	179601-23-1	**0.00686**	0.00399	mg/kg	05.30.19 00.40		1
o-Xylene	95-47-6	**0.00302**	0.00200	mg/kg	05.30.19 00.40		1
Total Xylenes	1330-20-7	**0.00988**	0.00200	mg/kg	05.30.19 00.40		1
Total BTEX		**0.00988**	0.00200	mg/kg	05.30.19 00.40		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	96	%	70-130	05.30.19 00.40	
4-Bromofluorobenzene	460-00-4	118	%	70-130	05.30.19 00.40	

Certificate of Analytical Results 625759

LT Environmental, Inc., Arvada, CO

Ross Draw 30-31

Sample Id:	**BH03A**	Matrix:	Soil	Date Received:	05.29.19 12.15
Lab Sample Id:	625759-006	Date Collected:	05.24.19 10.30	Sample Depth:	4 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	SPC			% Moisture:	
Analyst:	SPC	Date Prep:	05.29.19 12.00	Basis:	Wet Weight
Seq Number:	3090535				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**17.4**	5.00	mg/kg	05.29.19 16.01		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	05.29.19 11.00	Basis:	Wet Weight
Seq Number:	3090586				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	05.29.19 15.58	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	05.29.19 15.58	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	05.29.19 15.58	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	05.29.19 15.58	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	05.29.19 15.58	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	95	%	70-135	05.29.19 15.58	
o-Terphenyl	84-15-1	94	%	70-135	05.29.19 15.58	

Certificate of Analytical Results 625759

LT Environmental, Inc., Arvada, CO

Ross Draw 30-31

Sample Id:	**BH03A**	Matrix:	Soil	Date Received:	05.29.19 12.15
Lab Sample Id:	625759-006	Date Collected:	05.24.19 10.30	Sample Depth:	4 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	05.29.19 13.00	Basis:	Wet Weight
Seq Number:	3090589				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	05.30.19 00.59	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	05.30.19 00.59	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	05.30.19 00.59	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	05.30.19 00.59	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	05.30.19 00.59	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	05.30.19 00.59	U	1
Total BTEX		<0.00201	0.00201	mg/kg	05.30.19 00.59	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	119	%	70-130	05.30.19 00.59	
1,4-Difluorobenzene	540-36-3	97	%	70-130	05.30.19 00.59	

Certificate of Analytical Results 625759

LT Environmental, Inc., Arvada, CO

Ross Draw 30-31

Sample Id:	**BH04**	Matrix:	Soil	Date Received:	05.29.19 12.15
Lab Sample Id:	625759-007	Date Collected:	05.20.19 13.10	Sample Depth:	1 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	SPC			% Moisture:	
Analyst:	SPC	Date Prep:	05.29.19 12.00	Basis:	Wet Weight
Seq Number:	3090535				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**17.6**	5.00	mg/kg	05.29.19 14.48		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	05.29.19 11.00	Basis:	Wet Weight
Seq Number:	3090586				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	05.29.19 16.17	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	05.29.19 16.17	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	05.29.19 16.17	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	05.29.19 16.17	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	05.29.19 16.17	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	95	%	70-135	05.29.19 16.17	
o-Terphenyl	84-15-1	94	%	70-135	05.29.19 16.17	

Certificate of Analytical Results 625759

LT Environmental, Inc., Arvada, CO

Ross Draw 30-31

Sample Id:	**BH04**	Matrix:	Soil	Date Received:	05.29.19 12.15
Lab Sample Id:	625759-007	Date Collected:	05.20.19 13.10	Sample Depth:	1 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	05.29.19 13.00	Basis:	Wet Weight
Seq Number:	3090589				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	05.30.19 01.18	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	05.30.19 01.18	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	05.30.19 01.18	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	05.30.19 01.18	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	05.30.19 01.18	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	05.30.19 01.18	U	1
Total BTEX		<0.00199	0.00199	mg/kg	05.30.19 01.18	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	96	%	70-130	05.30.19 01.18	
4-Bromofluorobenzene	460-00-4	119	%	70-130	05.30.19 01.18	

Certificate of Analytical Results 625759

LT Environmental, Inc., Arvada, CO

Ross Draw 30-31

Sample Id:	**BH04A**	Matrix:	Soil	Date Received:	05.29.19 12.15
Lab Sample Id:	625759-008	Date Collected:	05.24.19 10.45	Sample Depth:	3 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	SPC			% Moisture:	
Analyst:	SPC	Date Prep:	05.29.19 12.00	Basis:	Wet Weight
Seq Number:	3090535				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**24.6**	5.01	mg/kg	05.29.19 16.08		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	05.29.19 11.00	Basis:	Wet Weight
Seq Number:	3090586				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	05.29.19 16.36	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	05.29.19 16.36	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	05.29.19 16.36	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	05.29.19 16.36	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	05.29.19 16.36	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	94	%	70-135	05.29.19 16.36	
o-Terphenyl	84-15-1	91	%	70-135	05.29.19 16.36	

Certificate of Analytical Results 625759

LT Environmental, Inc., Arvada, CO

Ross Draw 30-31

Sample Id:	**BH04A**	Matrix:	Soil	Date Received:	05.29.19 12.15
Lab Sample Id:	625759-008	Date Collected:	05.24.19 10.45	Sample Depth:	3 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	05.29.19 13.00	Basis:	Wet Weight
Seq Number:	3090589				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	05.30.19 01.37	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	05.30.19 01.37	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	05.30.19 01.37	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	05.30.19 01.37	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	05.30.19 01.37	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	05.30.19 01.37	U	1
Total BTEX		<0.00199	0.00199	mg/kg	05.30.19 01.37	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	95	%	70-130	05.30.19 01.37	
4-Bromofluorobenzene	460-00-4	124	%	70-130	05.30.19 01.37	

Certificate of Analytical Results 625759

LT Environmental, Inc., Arvada, CO

Ross Draw 30-31

Sample Id:	**BH05**	Matrix:	Soil	Date Received:	05.29.19 12.15
Lab Sample Id:	625759-009	Date Collected:	05.20.19 13.25	Sample Depth:	1 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	SPC			% Moisture:	
Analyst:	SPC	Date Prep:	05.29.19 12.00	Basis:	Wet Weight
Seq Number:	3090535				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**52.1**	5.02	mg/kg	05.29.19 16.53		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	05.29.19 11.00	Basis:	Wet Weight
Seq Number:	3090586				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	05.29.19 16.56	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	05.29.19 16.56	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	05.29.19 16.56	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	05.29.19 16.56	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	05.29.19 16.56	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	98	%	70-135	05.29.19 16.56	
o-Terphenyl	84-15-1	97	%	70-135	05.29.19 16.56	

Certificate of Analytical Results 625759

LT Environmental, Inc., Arvada, CO

Ross Draw 30-31

Sample Id:	**BH05**	Matrix:	Soil	Date Received:	05.29.19 12.15
Lab Sample Id:	625759-009	Date Collected:	05.20.19 13.25	Sample Depth:	1 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	05.29.19 13.00	Basis:	Wet Weight
Seq Number:	3090589				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	05.30.19 01.56	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	05.30.19 01.56	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	05.30.19 01.56	U	1
m,p-Xylenes	179601-23-1	**0.0167**	0.00403	mg/kg	05.30.19 01.56		1
o-Xylene	95-47-6	**0.00578**	0.00202	mg/kg	05.30.19 01.56		1
Total Xylenes	1330-20-7	**0.0225**	0.00202	mg/kg	05.30.19 01.56		1
Total BTEX		**0.0225**	0.00202	mg/kg	05.30.19 01.56		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	121	%	70-130	05.30.19 01.56	
1,4-Difluorobenzene	540-36-3	94	%	70-130	05.30.19 01.56	

Certificate of Analytical Results 625759

LT Environmental, Inc., Arvada, CO

Ross Draw 30-31

Sample Id:	**BH05A**	Matrix:	Soil	Date Received:	05.29.19 12.15
Lab Sample Id:	625759-010	Date Collected:	05.24.19 11.45	Sample Depth:	4 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	SPC			% Moisture:	
Analyst:	SPC	Date Prep:	05.29.19 12.00	Basis:	Wet Weight
Seq Number:	3090535				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**10.6**	5.01	mg/kg	05.29.19 18.49		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	05.29.19 11.00	Basis:	Wet Weight
Seq Number:	3090586				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<14.9	14.9	mg/kg	05.29.19 17.15	U	1
Diesel Range Organics (DRO)	C10C28DRO	<14.9	14.9	mg/kg	05.29.19 17.15	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<14.9	14.9	mg/kg	05.29.19 17.15	U	1
Total TPH	PHC635	<14.9	14.9	mg/kg	05.29.19 17.15	U	1
Total GRO-DRO	PHC628	<14.9	14.9	mg/kg	05.29.19 17.15	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	95	%	70-135	05.29.19 17.15	
o-Terphenyl	84-15-1	93	%	70-135	05.29.19 17.15	

Certificate of Analytical Results 625759

LT Environmental, Inc., Arvada, CO

Ross Draw 30-31

Sample Id:	**BH05A**	Matrix:	Soil	Date Received:	05.29.19 12.15
Lab Sample Id:	625759-010	Date Collected:	05.24.19 11.45	Sample Depth:	4 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	05.29.19 13.00	Basis:	Wet Weight
Seq Number:	3090589				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	05.30.19 02.15	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	05.30.19 02.15	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	05.30.19 02.15	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	05.30.19 02.15	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	05.30.19 02.15	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	05.30.19 02.15	U	1
Total BTEX		<0.00200	0.00200	mg/kg	05.30.19 02.15	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	122	%	70-130	05.30.19 02.15	
1,4-Difluorobenzene	540-36-3	95	%	70-130	05.30.19 02.15	

Certificate of Analytical Results 625759

LT Environmental, Inc., Arvada, CO

Ross Draw 30-31

Sample Id:	**BH06**	Matrix:	Soil	Date Received:	05.29.19 12.15
Lab Sample Id:	625759-011	Date Collected:	05.20.19 13.40	Sample Depth:	1 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	SPC			% Moisture:	
Analyst:	SPC	Date Prep:	05.29.19 12.00	Basis:	Wet Weight
Seq Number:	3090535				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**94.9**	5.01	mg/kg	05.29.19 16.22		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	05.29.19 11.00	Basis:	Wet Weight
Seq Number:	3090586				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	05.29.19 17.54	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	05.29.19 17.54	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	05.29.19 17.54	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	05.29.19 17.54	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	05.29.19 17.54	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	93	%	70-135	05.29.19 17.54	
o-Terphenyl	84-15-1	93	%	70-135	05.29.19 17.54	

Certificate of Analytical Results 625759

LT Environmental, Inc., Arvada, CO

Ross Draw 30-31

Sample Id:	**BH06**	Matrix:	Soil	Date Received:	05.29.19 12.15
Lab Sample Id:	625759-011	Date Collected:	05.20.19 13.40	Sample Depth:	1 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	05.29.19 13.00	Basis:	Wet Weight
Seq Number:	3090589				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	05.30.19 03.29	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	05.30.19 03.29	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	05.30.19 03.29	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	05.30.19 03.29	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	05.30.19 03.29	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	05.30.19 03.29	U	1
Total BTEX		<0.00200	0.00200	mg/kg	05.30.19 03.29	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	94	%	70-130	05.30.19 03.29	
4-Bromofluorobenzene	460-00-4	114	%	70-130	05.30.19 03.29	

Certificate of Analytical Results 625759

LT Environmental, Inc., Arvada, CO

Ross Draw 30-31

Sample Id:	**BH06A**	Matrix:	Soil	Date Received:	05.29.19 12.15
Lab Sample Id:	625759-012	Date Collected:	05.20.19 13.45	Sample Depth:	2 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	SPC			% Moisture:	
Analyst:	SPC	Date Prep:	05.29.19 12.00	Basis:	Wet Weight
Seq Number:	3090535				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**147**	5.02	mg/kg	05.29.19 17.14		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	05.29.19 11.00	Basis:	Wet Weight
Seq Number:	3090586				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	05.29.19 18.13	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	05.29.19 18.13	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	05.29.19 18.13	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	05.29.19 18.13	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	05.29.19 18.13	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	95	%	70-135	05.29.19 18.13	
o-Terphenyl	84-15-1	94	%	70-135	05.29.19 18.13	

Certificate of Analytical Results 625759

LT Environmental, Inc., Arvada, CO

Ross Draw 30-31

Sample Id:	**BH06A**	Matrix:	Soil	Date Received:	05.29.19 12.15
Lab Sample Id:	625759-012	Date Collected:	05.20.19 13.45	Sample Depth:	2 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	05.29.19 13.00	Basis:	Wet Weight
Seq Number:	3090589				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	05.30.19 03.48	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	05.30.19 03.48	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	05.30.19 03.48	U	1
m,p-Xylenes	179601-23-1	**0.00466**	0.00398	mg/kg	05.30.19 03.48		1
o-Xylene	95-47-6	**0.00210**	0.00199	mg/kg	05.30.19 03.48		1
Total Xylenes	1330-20-7	**0.00676**	0.00199	mg/kg	05.30.19 03.48		1
Total BTEX		**0.00676**	0.00199	mg/kg	05.30.19 03.48		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	96	%	70-130	05.30.19 03.48	
4-Bromofluorobenzene	460-00-4	119	%	70-130	05.30.19 03.48	

Certificate of Analytical Results 625759

LT Environmental, Inc., Arvada, CO

Ross Draw 30-31

Sample Id:	**BH07**	Matrix:	Soil	Date Received:	05.29.19 12.15
Lab Sample Id:	625759-013	Date Collected:	05.20.19 13.55	Sample Depth:	1 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	SPC			% Moisture:	
Analyst:	SPC	Date Prep:	05.29.19 12.00	Basis:	Wet Weight
Seq Number:	3090535				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**35.5**	5.00	mg/kg	05.29.19 17.22		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	05.29.19 11.00	Basis:	Wet Weight
Seq Number:	3090586				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	05.29.19 18.32	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	05.29.19 18.32	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	05.29.19 18.32	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	05.29.19 18.32	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	05.29.19 18.32	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	95	%	70-135	05.29.19 18.32	
o-Terphenyl	84-15-1	94	%	70-135	05.29.19 18.32	

Certificate of Analytical Results 625759

LT Environmental, Inc., Arvada, CO

Ross Draw 30-31

Sample Id:	**BH07**	Matrix:	Soil	Date Received:	05.29.19 12.15
Lab Sample Id:	625759-013	Date Collected:	05.20.19 13.55	Sample Depth:	1 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	05.29.19 13.00	Basis:	Wet Weight
Seq Number:	3090589				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	05.30.19 04.07	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	05.30.19 04.07	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	05.30.19 04.07	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	05.30.19 04.07	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	05.30.19 04.07	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	05.30.19 04.07	U	1
Total BTEX		<0.00201	0.00201	mg/kg	05.30.19 04.07	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	121	%	70-130	05.30.19 04.07	
1,4-Difluorobenzene	540-36-3	95	%	70-130	05.30.19 04.07	

Certificate of Analytical Results 625759

LT Environmental, Inc., Arvada, CO

Ross Draw 30-31

Sample Id:	**BH07A**	Matrix:	Soil	Date Received:	05.29.19 12.15
Lab Sample Id:	625759-014	Date Collected:	05.20.19 14.00	Sample Depth:	2 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	SPC			% Moisture:	
Analyst:	SPC	Date Prep:	05.29.19 12.00	Basis:	Wet Weight
Seq Number:	3090535				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**100**	5.02	mg/kg	05.29.19 17.43		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	05.29.19 11.00	Basis:	Wet Weight
Seq Number:	3090586				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	05.29.19 18.52	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	05.29.19 18.52	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	05.29.19 18.52	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	05.29.19 18.52	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	05.29.19 18.52	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	95	%	70-135	05.29.19 18.52	
o-Terphenyl	84-15-1	95	%	70-135	05.29.19 18.52	

Certificate of Analytical Results 625759

LT Environmental, Inc., Arvada, CO

Ross Draw 30-31

Sample Id:	**BH07A**	Matrix:	Soil	Date Received:	05.29.19 12.15
Lab Sample Id:	625759-014	Date Collected:	05.20.19 14.00	Sample Depth:	2 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	05.29.19 13.00	Basis:	Wet Weight
Seq Number:	3090589				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	05.30.19 04.26	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	05.30.19 04.26	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	05.30.19 04.26	U	1
m,p-Xylenes	179601-23-1	**0.00585**	0.00397	mg/kg	05.30.19 04.26		1
o-Xylene	95-47-6	**0.00248**	0.00198	mg/kg	05.30.19 04.26		1
Total Xylenes	1330-20-7	**0.00833**	0.00198	mg/kg	05.30.19 04.26		1
Total BTEX		**0.00833**	0.00198	mg/kg	05.30.19 04.26		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	95	%	70-130	05.30.19 04.26	
4-Bromofluorobenzene	460-00-4	120	%	70-130	05.30.19 04.26	

Certificate of Analytical Results 625759

LT Environmental, Inc., Arvada, CO

Ross Draw 30-31

Sample Id:	**BH08**	Matrix:	Soil	Date Received:	05.29.19 12.15
Lab Sample Id:	625759-015	Date Collected:	05.22.19 09.40	Sample Depth:	1 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	SPC			% Moisture:	
Analyst:	SPC	Date Prep:	05.29.19 12.00	Basis:	Wet Weight
Seq Number:	3090535				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**127**	5.00	mg/kg	05.29.19 17.51		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	05.29.19 11.00	Basis:	Wet Weight
Seq Number:	3090586				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<14.9	14.9	mg/kg	05.29.19 19.11	U	1
Diesel Range Organics (DRO)	C10C28DRO	<14.9	14.9	mg/kg	05.29.19 19.11	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<14.9	14.9	mg/kg	05.29.19 19.11	U	1
Total TPH	PHC635	<14.9	14.9	mg/kg	05.29.19 19.11	U	1
Total GRO-DRO	PHC628	<14.9	14.9	mg/kg	05.29.19 19.11	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	95	%	70-135	05.29.19 19.11	
o-Terphenyl	84-15-1	95	%	70-135	05.29.19 19.11	

Certificate of Analytical Results 625759

LT Environmental, Inc., Arvada, CO

Ross Draw 30-31

Sample Id:	**BH08**	Matrix:	Soil	Date Received:	05.29.19 12.15
Lab Sample Id:	625759-015	Date Collected:	05.22.19 09.40	Sample Depth:	1 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	05.29.19 13.00	Basis:	Wet Weight
Seq Number:	3090589				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	05.30.19 04.45	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	05.30.19 04.45	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	05.30.19 04.45	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	05.30.19 04.45	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	05.30.19 04.45	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	05.30.19 04.45	U	1
Total BTEX		<0.00201	0.00201	mg/kg	05.30.19 04.45	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	96	%	70-130	05.30.19 04.45	
4-Bromofluorobenzene	460-00-4	121	%	70-130	05.30.19 04.45	

Certificate of Analytical Results 625759

LT Environmental, Inc., Arvada, CO

Ross Draw 30-31

Sample Id:	**BH08A**	Matrix:	Soil	Date Received:	05.29.19 12.15
Lab Sample Id:	625759-016	Date Collected:	05.22.19 09.45	Sample Depth:	2 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	SPC			% Moisture:	
Analyst:	SPC	Date Prep:	05.29.19 12.00	Basis:	Wet Weight
Seq Number:	3090535				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**120**	5.03	mg/kg	05.29.19 17.58		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	05.29.19 11.00	Basis:	Wet Weight
Seq Number:	3090586				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	05.29.19 19.30	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	05.29.19 19.30	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	05.29.19 19.30	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	05.29.19 19.30	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	05.29.19 19.30	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	96	%	70-135	05.29.19 19.30	
o-Terphenyl	84-15-1	94	%	70-135	05.29.19 19.30	

Certificate of Analytical Results 625759

LT Environmental, Inc., Arvada, CO

Ross Draw 30-31

Sample Id:	**BH08A**	Matrix:	Soil	Date Received:	05.29.19 12.15
Lab Sample Id:	625759-016	Date Collected:	05.22.19 09.45	Sample Depth:	2 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	05.29.19 13.00	Basis:	Wet Weight
Seq Number:	3090589				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	05.30.19 05.04	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	05.30.19 05.04	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	05.30.19 05.04	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	05.30.19 05.04	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	05.30.19 05.04	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	05.30.19 05.04	U	1
Total BTEX		<0.00200	0.00200	mg/kg	05.30.19 05.04	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	94	%	70-130	05.30.19 05.04	
4-Bromofluorobenzene	460-00-4	123	%	70-130	05.30.19 05.04	

Certificate of Analytical Results 625759

LT Environmental, Inc., Arvada, CO

Ross Draw 30-31

Sample Id:	**BH09**	Matrix:	Soil	Date Received:	05.29.19 12.15
Lab Sample Id:	625759-017	Date Collected:	05.22.19 08.15	Sample Depth:	1 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	SPC			% Moisture:	
Analyst:	SPC	Date Prep:	05.29.19 12.00	Basis:	Wet Weight
Seq Number:	3090535				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**29.5**	4.97	mg/kg	05.29.19 18.05		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	05.29.19 11.00	Basis:	Wet Weight
Seq Number:	3090586				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	05.29.19 19.49	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	05.29.19 19.49	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	05.29.19 19.49	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	05.29.19 19.49	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	05.29.19 19.49	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	93	%	70-135	05.29.19 19.49	
o-Terphenyl	84-15-1	91	%	70-135	05.29.19 19.49	

Certificate of Analytical Results 625759

LT Environmental, Inc., Arvada, CO

Ross Draw 30-31

Sample Id:	**BH09**	Matrix:	Soil	Date Received:	05.29.19 12.15
Lab Sample Id:	625759-017	Date Collected:	05.22.19 08.15	Sample Depth:	1 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	05.29.19 13.00	Basis:	Wet Weight
Seq Number:	3090589				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	05.30.19 05.23	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	05.30.19 05.23	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	05.30.19 05.23	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	05.30.19 05.23	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	05.30.19 05.23	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	05.30.19 05.23	U	1
Total BTEX		<0.00202	0.00202	mg/kg	05.30.19 05.23	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	94	%	70-130	05.30.19 05.23	
4-Bromofluorobenzene	460-00-4	120	%	70-130	05.30.19 05.23	

Certificate of Analytical Results 625759

LT Environmental, Inc., Arvada, CO

Ross Draw 30-31

Sample Id:	**BH09A**	Matrix:	Soil	Date Received:	05.29.19 12.15
Lab Sample Id:	625759-018	Date Collected:	05.22.19 08.40	Sample Depth:	4 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	SPC			% Moisture:	
Analyst:	SPC	Date Prep:	05.29.19 12.00	Basis:	Wet Weight
Seq Number:	3090535				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**15.6**	5.04	mg/kg	05.29.19 18.12		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	05.29.19 11.00	Basis:	Wet Weight
Seq Number:	3090586				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	05.29.19 20.09	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	05.29.19 20.09	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	05.29.19 20.09	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	05.29.19 20.09	U	1
Total GRO-DRO	PHC628	<15.0	15.0	mg/kg	05.29.19 20.09	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	92	%	70-135	05.29.19 20.09	
o-Terphenyl	84-15-1	90	%	70-135	05.29.19 20.09	

Certificate of Analytical Results 625759

LT Environmental, Inc., Arvada, CO

Ross Draw 30-31

Sample Id:	**BH09A**	Matrix:	Soil	Date Received:	05.29.19 12.15
Lab Sample Id:	625759-018	Date Collected:	05.22.19 08.40	Sample Depth:	4 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	05.29.19 13.00	Basis:	Wet Weight
Seq Number:	3090589				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	05.30.19 05.42	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	05.30.19 05.42	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	05.30.19 05.42	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	05.30.19 05.42	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	05.30.19 05.42	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	05.30.19 05.42	U	1
Total BTEX		<0.00199	0.00199	mg/kg	05.30.19 05.42	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	119	%	70-130	05.30.19 05.42	
1,4-Difluorobenzene	540-36-3	95	%	70-130	05.30.19 05.42	

Flagging Criteria

X In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.

B A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.

D The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.

E The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.

F RPD exceeded lab control limits.

J The target analyte was positively identified below the quantitation limit and above the detection limit.

U Analyte was not detected.

L The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.

H The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.

K Sample analyzed outside of recommended hold time.

JN A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

MDL Method Detection Limit **SDL** Sample Detection Limit **LOD** Limit of Detection

PQL Practical Quantitation Limit **MQL** Method Quantitation Limit **LOQ** Limit of Quantitation

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

BKS/LCS Blank Spike/Laboratory Control Sample **BKSD/LCSD** Blank Spike Duplicate/Laboratory Control Sample Duplicate

MD/SD Method Duplicate/Sample Duplicate **MS** Matrix Spike **MSD:** Matrix Spike Duplicate

+ NELAC certification not offered for this compound.

***** (Next to analyte name or method description) = Outside XENCO's scope of NELAC accreditation

QC Summary 625759

LT Environmental, Inc.

Ross Draw 30-31

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3090535 Matrix: Solid Date Prep: 05.29.19
MB Sample Id: 7678770-1-BLK LCS Sample Id: 7678770-1-BKS LCSD Sample Id: 7678770-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<0.858	250	228	91	228	91	90-110	0	20	mg/kg	05.29.19 13:10	

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3090535 Matrix: Soil Date Prep: 05.29.19
Parent Sample Id: 625759-007 MS Sample Id: 625759-007 S MSD Sample Id: 625759-007 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	17.6	250	257	96	255	95	90-110	1	20	mg/kg	05.29.19 14:55	

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3090535 Matrix: Soil Date Prep: 05.29.19
Parent Sample Id: 625759-009 MS Sample Id: 625759-009 S MSD Sample Id: 625759-009 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	52.1	251	296	97	296	97	90-110	0	20	mg/kg	05.29.19 17:00	

Analytical Method: **TPH by SW8015 Mod** Prep Method: TX1005P
Seq Number: 3090586 Matrix: Solid Date Prep: 05.29.19
MB Sample Id: 7678857-1-BLK LCS Sample Id: 7678857-1-BKS LCSD Sample Id: 7678857-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<8.00	1000	1070	107	1060	106	70-135	1	20	mg/kg	05.29.19 13:02	
Diesel Range Organics (DRO)	<8.13	1000	1010	101	1020	102	70-135	1	20	mg/kg	05.29.19 13:02	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	95		119		121		70-135	%	05.29.19 13:02
o-Terphenyl	96		104		114		70-135	%	05.29.19 13:02

MS/MSD Percent Recovery [D] = 100*(C-A) / B LCS = Laboratory Control Sample MS = Matrix Spike
Relative Percent Difference RPD = 200* | (C-E) / (C+E) | A = Parent Result B = Spike Added
LCS/LCSD Recovery [D] = 100 * (C) / [B] C = MS/LCS Result D = MSD/LCSD % Rec
Log Difference Log Diff. = Log(Sample Duplicate) - Log(Original Sample) E = MSD/LCSD Result

QC Summary 625759

LT Environmental, Inc.

Ross Draw 30-31

Analytical Method: **TPH by SW8015 Mod** Prep Method: TX1005P
Seq Number: 3090586 Matrix: Soil Date Prep: 05.29.19
Parent Sample Id: 625759-001 MS Sample Id: 625759-001 S MSD Sample Id: 625759-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<7.99	998	1070	107	1080	108	70-135	1	20	mg/kg	05.29.19 14:01	
Diesel Range Organics (DRO)	<8.11	998	1020	102	1060	106	70-135	4	20	mg/kg	05.29.19 14:01	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	117		119		70-135	%	05.29.19 14:01
o-Terphenyl	106		106		70-135	%	05.29.19 14:01

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B
Seq Number: 3090589 Matrix: Solid Date Prep: 05.29.19
MB Sample Id: 7678775-1-BLK LCS Sample Id: 7678775-1-BKS LCSD Sample Id: 7678775-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.0998	0.0975	98	0.0957	96	70-130	2	35	mg/kg	05.29.19 21:32	
Toluene	<0.00200	0.0998	0.101	101	0.0983	98	70-130	3	35	mg/kg	05.29.19 21:32	
Ethylbenzene	<0.00200	0.0998	0.112	112	0.109	109	70-130	3	35	mg/kg	05.29.19 21:32	
m,p-Xylenes	<0.00399	0.200	0.239	120	0.232	116	70-130	3	35	mg/kg	05.29.19 21:32	
o-Xylene	<0.00200	0.0998	0.116	116	0.112	112	70-130	4	35	mg/kg	05.29.19 21:32	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	103		90		90		70-130	%	05.29.19 21:32
4-Bromofluorobenzene	108		104		103		70-130	%	05.29.19 21:32

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B
Seq Number: 3090589 Matrix: Soil Date Prep: 05.29.19
Parent Sample Id: 625759-001 MS Sample Id: 625759-001 S MSD Sample Id: 625759-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00202	0.101	0.0766	76	0.0705	71	70-130	8	35	mg/kg	05.29.19 22:10	
Toluene	<0.00202	0.101	0.0825	82	0.0711	72	70-130	15	35	mg/kg	05.29.19 22:10	
Ethylbenzene	<0.00202	0.101	0.0871	86	0.0729	73	70-130	18	35	mg/kg	05.29.19 22:10	
m,p-Xylenes	0.00370	0.202	0.190	92	0.160	79	70-130	17	35	mg/kg	05.29.19 22:10	
o-Xylene	<0.00202	0.101	0.0929	92	0.0772	78	70-130	18	35	mg/kg	05.29.19 22:10	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	91		92		70-130	%	05.29.19 22:10
4-Bromofluorobenzene	114		109		70-130	%	05.29.19 22:10

MS/MSD Percent Recovery [D] = 100*(C-A) / B LCS = Laboratory Control Sample MS = Matrix Spike
Relative Percent Difference RPD = 200* | (C-E) / (C+E) | A = Parent Result B = Spike Added
LCS/LCSD Recovery [D] = 100 * (C) / [B] C = MS/LCS Result D = MSD/LCSD % Rec
Log Difference Log Diff. = Log(Sample Duplicate) - Log(Original Sample) E = MSD/LCSD Result

Chain of Custody

Work Order No: 675759

XENCO LABORATORIES

Houston,TX (281) 240-4200 Dallas,TX (214) 902-0300 San Antonio,TX (210) 509-3334
Midland,TX (432-704-5440) EL Paso,TX (915)585-3443 Lubbock,TX (806)794-1296
Hobbs,NM (575-392-7550) Phoenix,AZ (480-355-0900) Atlanta,GA (770-449-8800) Tampa,FL (813-620-2000)

www.xenco.com Page 1 of 2

Project Manager:	Dan Moir	Bill to: (if different)	Kyle Littrell
Company Name:	LT Environmental, Inc., Permian office	Company Name:	XTO
Address:	3300 North A Street	Address:	
City, State ZIP:	Midland, TX 79705	City, State ZIP:	Midland, Tx 79705
Phone:	432.704.5178	Email:	Ggreen@Ltenv.com

Work Order Comments

Program: UST/PST ☐ PRP ☐ Brownfields ☐ RC ☐ Superfund ☐
State of Project:
Reporting:Level II ☐ Level III ☐ ST/UST ☐ RRP ☐ Level IV ☐
Deliverables: EDD ☐ ADaPT ☐ Other:

Project Name:	Ross Draw 30-31	Turn Around	
Project Number:		Routine ☐	
P.O. Number:	2RP-5330	Rush: Yes	
Sampler's Name:	Garrett Green	Due Date: 5/30	

SAMPLE RECEIPT			
Temp Blank:	Yes (No)	Wet Ice:	(Yes) No
Temperature (°C):	0.0/0.4	Thermometer ID:	
Received Intact:	(Yes) No		
Cooler Custody Seals:	Yes No N/A	Correction Factor:	+0.2
Sample Custody Seals:	Yes (No) N/A	Total Containers:	

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 0=8021)	Chloride (EPA 300.0)
BH01	S	5/20/19	1225	1'	1	X	X	X
BH01A		5/22/19	0900	4'	1			
BH02		5/20/19	1240	1'	1			
BH02A		5/22/19	0925	4'	1			
BH03		5/20/19	1255	1'	1			
BH03A		5/24/19	1030	4'	1			
BH04		5/20/19	1310	1'	1			
BH04A		5/24/19	1045	3'	1			
BH05		5/20/19	1325	1'	1			
BH05A	↓	5/24/19	1145	4'	1	↓	↓	↓

ANALYSIS REQUEST

Work Order Notes

TAT starts the day recevied by the lab, if received by 4:30pm

Sample Comments

Total 200.7 / 6010 200.8 / 6020: 8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO2 Na Sr Tl Sn U V Zn

Circle Method(s) and Metal(s) to be analyzed **TCLP / SPLP 6010**: 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Tl U **1631 / 245.1 / 7470 / 7471** : Hg

	Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1	Scott Sun		05/28/2019 11:00	2		05/28/19 12:00
3				4		5/29/19
5				6		1215

Revised Date 051418 Rev. 2018.1

Chain of Custody

XENCO LABORATORIES

Houston,TX (281) 240-4200 Dallas,TX (214) 902-0300 San Antonio,TX (210) 509-3334
Midland,TX (432-704-5440) EL Paso,TX (915)585-3443 Lubbock,TX (806)794-1296
Hobbs,NM (575-392-7550) Phoenix,AZ (480-355-0900) Atlanta,GA (770-449-8800) Tampa,FL (813-620-2000)

Work Order No: 457594

www.xenco.com Page 2 of 2

Project Manager:	Dan Moir	Bill to: (if different)	Kyle Littrell
Company Name:	LT Environmental, Inc., Permian office	Company Name:	XTO
Address:	3300 North A Street	Address:	
City, State ZIP:	Midland, TX 79705	City, State ZIP:	Midland, Tx 79705
Phone:	432.704.5178	Email:	Ggreen@Ltenv.com

Work Order Comments

Program: UST/PST ☐ PRP ☐ Brownfields ☐ RC ☐ Superfund ☐
State of Project:
Reporting:Level II ☐ Level III ☐ TST/UST ☐ RRP ☐ Level IV ☐
Deliverables: EDD ☐ ADaPT ☐ Other:

Project Name:	Ross Draw 30-31	Turn Around	
Project Number:		Routine ☐	
P.O. Number:	2RP-5330	Rush: Yes	
Sampler's Name:	Garrett Green	Due Date: 5/30	

SAMPLE RECEIPT			
Temp Blank:	Yes (No)	Wet Ice:	(Yes) No
Temperature (°C):	0.6/0.4	Thermometer ID	NE
Received Intact:	(Yes) No		
Cooler Custody Seals:	Yes (No) N/A	Correction Factor:	-0.2
Sample Custody Seals:	Yes (No) N/A	Total Containers:	

ANALYSIS REQUEST

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 0=8021)	Chloride (EPA 300.0)
BH06	S	5/20/19	1340	1'	1	X	X	X
BH06A		5/20/19	1345	2'	1			
BH07		5/20/19	1355	1'	1			
BH07A		5/20/19	1400	2'	1			
BH08		5/22/19	0940	1'	1			
BH08A		5/22/19	0945	2'	1			
BH09		5/22/19	0815	1'	1			
BH09A		5/22/19	0840	4'	1			

Work Order Notes

TAT starts the day recevied by the lab, if received by 4:30pm

Sample Comments

Total 200.7 / 6010 200.8 / 6020: 8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO2 Na Sr Tl Sn U V Zn

Circle Method(s) and Metal(s) to be analyzed **TCLP / SPLP 6010**: 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Tl U **1631 / 245.1 / 7470 / 7471** : Hg

	Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1			05/28/2019 11:00	2		05/28/19 12:20
3				4		5/29/19
5				6		1230

Revised Date 051418 Rev. 2018.1

Final 1.000

Page 48 of 49

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 05/29/2019 12:15:00 PM

Work Order #: 625759

Acceptable Temperature Range: 0 - 6 degC
Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : R8

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	.4
#2 *Shipping container in good condition?	**Yes**
#3 *Samples received on ice?	**Yes**
#4 *Custody Seals intact on shipping container/ cooler?	**N/A**
#5 Custody Seals intact on sample bottles?	**N/A**
#6*Custody Seals Signed and dated?	**N/A**
#7 *Chain of Custody present?	**Yes**
#8 Any missing/extra samples?	**No**
#9 Chain of Custody signed when relinquished/ received?	**Yes**
#10 Chain of Custody agrees with sample labels/matrix?	**Yes**
#11 Container label(s) legible and intact?	**Yes**
#12 Samples in proper container/ bottle?	**Yes**
#13 Samples properly preserved?	**Yes**
#14 Sample container(s) intact?	**Yes**
#15 Sufficient sample amount for indicated test(s)?	**Yes**
#16 All samples received within hold time?	**Yes**
#17 Subcontract of sample(s)?	**N/A**
#18 Water VOC samples have zero headspace?	**N/A**

*** Must be completed for after-hours delivery of samples prior to placing in the refrigerator**

Analyst: PH Device/Lot#:

Checklist completed by: Brianna Teel Date: 05/29/2019

Brianna Teel

Checklist reviewed by: Kalei Stout Date: 05/29/2019

Kalei Stout

Analytical Report 625760

for

LT Environmental, Inc.

Project Manager: Dan Moir

Ross Draw 30-31

05-JUN-19

Collected By: Client

1211 W. Florida Ave
Midland TX 79701

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-19-29), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)
Oklahoma (2017-142)

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (T104704295-19-19), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-18-14)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-19-20)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-18-18)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-18-4)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)
Xenco-Atlanta (LELAP Lab ID #04176)
Xenco-Tampa: Florida (E87429), North Carolina (483)

05-JUN-19

Project Manager: **Dan Moir**
LT Environmental, Inc.
4600 W. 60th Avenue
Arvada, CO 80003

Reference: XENCO Report No(s): **625760**
Ross Draw 30-31
Project Address: Delaware Basin

Dan Moir:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 625760. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. The uncertainty of measurement associated with the results of analysis reported is available upon request. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 625760 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting XENCO Laboratories to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

Jessica Kramer

Jessica Kramer
Project Assistant

Sample Cross Reference 625760

LT Environmental, Inc., Arvada, CO

Ross Draw 30-31

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SS02A	S	05-20-19 14:50	3 ft	625760-001
SS03A	S	05-20-19 15:10	4 ft	625760-002

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3090589 BTEX by EPA 8021B

Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Certificate of Analysis Summary 625760

LT Environmental, Inc., Arvada, CO

Project Name: Ross Draw 30-31

Project Id:
Contact: Dan Moir
Project Location: Delaware Basin

Date Received in Lab: Wed May-29-19 12:15 pm
Report Date: 05-JUN-19
Project Manager: Jessica Kramer

Analysis Requested									
	Lab Id:	625760-001		625760-002					
	Field Id:	SS02A		SS03A					
	Depth:	3- ft		4- ft					
	Matrix:	SOIL		SOIL					
	Sampled:	May-20-19 14:50		May-20-19 15:10					
BTEX by EPA 8021B	***Extracted:***	May-29-19 13:00		May-29-19 13:00					
	Analyzed:	May-30-19 06:01		May-30-19 06:20					
	Units/RL:	mg/kg	RL	mg/kg	RL				
Benzene		<0.00199	0.00199	<0.00201	0.00201				
Toluene		<0.00199	0.00199	<0.00201	0.00201				
Ethylbenzene		<0.00199	0.00199	<0.00201	0.00201				
m,p-Xylenes		0.00558	0.00398	0.00425	0.00402				
o-Xylene		0.0104	0.00199	0.00287	0.00201				
Total Xylenes		0.0160	0.00199	0.00712	0.00201				
Total BTEX		0.0160	0.00199	0.00712	0.00201				
Chloride by EPA 300	***Extracted:***	** ** ** **		** ** ** **					
	Analyzed:	May-29-19 18:20		May-29-19 18:27					
	Units/RL:	mg/kg	RL	mg/kg	RL				
Chloride		<5.02	5.02	51.7	4.98				
TPH by SW8015 Mod	***Extracted:***	May-29-19 17:00		Jun-01-19 10:00					
	Analyzed:	May-30-19 02:16		Jun-02-19 00:00					
	Units/RL:	mg/kg	RL	mg/kg	RL				
Gasoline Range Hydrocarbons (GRO)		<15.0	15.0	<15.0	15.0				
Diesel Range Organics (DRO)		99.6	15.0	79.7	15.0				
Motor Oil Range Hydrocarbons (MRO)		<15.0	15.0	<15.0	15.0				
Total TPH		99.6	15.0	79.7	15.0				
Total GRO-DRO		99.6	15.0	79.7	15.0				

Certificate of Analytical Results 625760

LT Environmental, Inc., Arvada, CO

Ross Draw 30-31

Sample Id:	**SS02A**	Matrix:	Soil	Date Received:	05.29.19 12.15
Lab Sample Id:	625760-001	Date Collected:	05.20.19 14.50	Sample Depth:	3 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	SPC			% Moisture:	
Analyst:	SPC	Date Prep:	05.29.19 12.00	Basis:	Wet Weight
Seq Number:	3090535				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<5.02	5.02	mg/kg	05.29.19 18.20	U	1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	05.29.19 17.00	Basis:	Wet Weight
Seq Number:	3090591				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	05.30.19 02.16	U	1
Diesel Range Organics (DRO)	C10C28DRO	**99.6**	15.0	mg/kg	05.30.19 02.16		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	05.30.19 02.16	U	1
Total TPH	PHC635	**99.6**	15.0	mg/kg	05.30.19 02.16		1
Total GRO-DRO	PHC628	**99.6**	15.0	mg/kg	05.30.19 02.16		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	95	%	70-135	05.30.19 02.16	
o-Terphenyl	84-15-1	96	%	70-135	05.30.19 02.16	

Certificate of Analytical Results 625760

LT Environmental, Inc., Arvada, CO

Ross Draw 30-31

Sample Id:	**SS02A**	Matrix:	Soil	Date Received:	05.29.19 12.15
Lab Sample Id:	625760-001	Date Collected:	05.20.19 14.50	Sample Depth:	3 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	05.29.19 13.00	Basis:	Wet Weight
Seq Number:	3090589				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	05.30.19 06.01	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	05.30.19 06.01	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	05.30.19 06.01	U	1
m,p-Xylenes	179601-23-1	**0.00558**	0.00398	mg/kg	05.30.19 06.01		1
o-Xylene	95-47-6	**0.0104**	0.00199	mg/kg	05.30.19 06.01		1
Total Xylenes	1330-20-7	**0.0160**	0.00199	mg/kg	05.30.19 06.01		1
Total BTEX		**0.0160**	0.00199	mg/kg	05.30.19 06.01		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	93	%	70-130	05.30.19 06.01	
4-Bromofluorobenzene	460-00-4	119	%	70-130	05.30.19 06.01	

Certificate of Analytical Results 625760

LT Environmental, Inc., Arvada, CO

Ross Draw 30-31

Sample Id:	**SS03A**	Matrix:	Soil	Date Received:	05.29.19 12.15
Lab Sample Id:	625760-002	Date Collected:	05.20.19 15.10	Sample Depth:	4 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	SPC			% Moisture:	
Analyst:	SPC	Date Prep:	05.29.19 12.00	Basis:	Wet Weight
Seq Number:	3090535				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**51.7**	4.98	mg/kg	05.29.19 18.27		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	06.01.19 10.00	Basis:	Wet Weight
Seq Number:	3090920				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	06.02.19 00.00	U	1
Diesel Range Organics (DRO)	C10C28DRO	**79.7**	15.0	mg/kg	06.02.19 00.00		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	06.02.19 00.00	U	1
Total TPH	PHC635	**79.7**	15.0	mg/kg	06.02.19 00.00		1
Total GRO-DRO	PHC628	**79.7**	15.0	mg/kg	06.02.19 00.00		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	96	%	70-135	06.02.19 00.00	
o-Terphenyl	84-15-1	96	%	70-135	06.02.19 00.00	

Certificate of Analytical Results 625760

LT Environmental, Inc., Arvada, CO

Ross Draw 30-31

Sample Id:	**SS03A**	Matrix:	Soil	Date Received:	05.29.19 12.15
Lab Sample Id:	625760-002	Date Collected:	05.20.19 15.10	Sample Depth:	4 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	05.29.19 13.00	Basis:	Wet Weight
Seq Number:	3090589				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	05.30.19 06.20	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	05.30.19 06.20	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	05.30.19 06.20	U	1
m,p-Xylenes	179601-23-1	**0.00425**	0.00402	mg/kg	05.30.19 06.20		1
o-Xylene	95-47-6	**0.00287**	0.00201	mg/kg	05.30.19 06.20		1
Total Xylenes	1330-20-7	**0.00712**	0.00201	mg/kg	05.30.19 06.20		1
Total BTEX		**0.00712**	0.00201	mg/kg	05.30.19 06.20		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	117	%	70-130	05.30.19 06.20	
1,4-Difluorobenzene	540-36-3	95	%	70-130	05.30.19 06.20	

Flagging Criteria

X In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.

B A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.

D The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.

E The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.

F RPD exceeded lab control limits.

J The target analyte was positively identified below the quantitation limit and above the detection limit.

U Analyte was not detected.

L The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.

H The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.

K Sample analyzed outside of recommended hold time.

JN A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

MDL Method Detection Limit **SDL** Sample Detection Limit **LOD** Limit of Detection

PQL Practical Quantitation Limit **MQL** Method Quantitation Limit **LOQ** Limit of Quantitation

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

BKS/LCS Blank Spike/Laboratory Control Sample **BKSD/LCSD** Blank Spike Duplicate/Laboratory Control Sample Duplicate

MD/SD Method Duplicate/Sample Duplicate **MS** Matrix Spike **MSD:** Matrix Spike Duplicate

+ NELAC certification not offered for this compound.

***** (Next to analyte name or method description) = Outside XENCO's scope of NELAC accreditation

QC Summary 625760

LT Environmental, Inc.

Ross Draw 30-31

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3090535 Matrix: Solid Date Prep: 05.29.19
MB Sample Id: 7678770-1-BLK LCS Sample Id: 7678770-1-BKS LCSD Sample Id: 7678770-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<0.858	250	228	91	228	91	90-110	0	20	mg/kg	05.29.19 13:10	

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3090535 Matrix: Soil Date Prep: 05.29.19
Parent Sample Id: 625759-007 MS Sample Id: 625759-007 S MSD Sample Id: 625759-007 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	17.6	250	257	96	255	95	90-110	1	20	mg/kg	05.29.19 14:55	

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3090535 Matrix: Soil Date Prep: 05.29.19
Parent Sample Id: 625759-009 MS Sample Id: 625759-009 S MSD Sample Id: 625759-009 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	52.1	251	296	97	296	97	90-110	0	20	mg/kg	05.29.19 17:00	

Analytical Method: **TPH by SW8015 Mod** Prep Method: TX1005P
Seq Number: 3090591 Matrix: Solid Date Prep: 05.29.19
MB Sample Id: 7678858-1-BLK LCS Sample Id: 7678858-1-BKS LCSD Sample Id: 7678858-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	13.1	1000	1090	109	1100	110	70-135	1	20	mg/kg	05.29.19 21:26	
Diesel Range Organics (DRO)	10.9	1000	1010	101	1010	101	70-135	0	20	mg/kg	05.29.19 21:26	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	99		120		123		70-135	%	05.29.19 21:26
o-Terphenyl	100		114		116		70-135	%	05.29.19 21:26

MS/MSD Percent Recovery [D] = 100*(C-A) / B LCS = Laboratory Control Sample MS = Matrix Spike
Relative Percent Difference RPD = 200* | (C-E) / (C+E) | A = Parent Result B = Spike Added
LCS/LCSD Recovery [D] = 100 * (C) / [B] C = MS/LCS Result D = MSD/LCSD % Rec
Log Difference Log Diff. = Log(Sample Duplicate) - Log(Original Sample) E = MSD/LCSD Result

QC Summary 625760

LT Environmental, Inc.

Ross Draw 30-31

Analytical Method: **TPH by SW8015 Mod** Prep Method: TX1005P
Seq Number: 3090920 Matrix: Solid Date Prep: 06.01.19
MB Sample Id: 7679065-1-BLK LCS Sample Id: 7679065-1-BKS LCSD Sample Id: 7679065-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<8.00	1000	1190	119	1200	120	70-135	1	20	mg/kg	06.01.19 21:25	
Diesel Range Organics (DRO)	<8.13	1000	1190	119	1150	115	70-135	3	20	mg/kg	06.01.19 21:25	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	99		126		127		70-135	%	06.01.19 21:25
o-Terphenyl	99		114		125		70-135	%	06.01.19 21:25

Analytical Method: **TPH by SW8015 Mod** Prep Method: TX1005P
Seq Number: 3090591 Matrix: Soil Date Prep: 05.29.19
Parent Sample Id: 625763-001 MS Sample Id: 625763-001 S MSD Sample Id: 625763-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	13.9	1000	1100	109	1100	109	70-135	0	20	mg/kg	05.29.19 22:24	
Diesel Range Organics (DRO)	238	1000	1140	90	1150	91	70-135	1	20	mg/kg	05.29.19 22:24	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	118		114		70-135	%	05.29.19 22:24
o-Terphenyl	113		105		70-135	%	05.29.19 22:24

Analytical Method: **TPH by SW8015 Mod** Prep Method: TX1005P
Seq Number: 3090920 Matrix: Water Date Prep: 06.01.19
Parent Sample Id: 625944-001 MS Sample Id: 625944-001 S MSD Sample Id: 625944-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	9.13	999	1050	104	1040	103	70-135	1	20	mg/kg	06.01.19 22:23	
Diesel Range Organics (DRO)	13.9	999	1010	100	1010	100	70-135	0	20	mg/kg	06.01.19 22:23	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	121		119		70-135	%	06.01.19 22:23
o-Terphenyl	94		103		70-135	%	06.01.19 22:23

MS/MSD Percent Recovery [D] = 100*(C-A) / B LCS = Laboratory Control Sample MS = Matrix Spike
Relative Percent Difference RPD = 200* | (C-E) / (C+E) | A = Parent Result B = Spike Added
LCS/LCSD Recovery [D] = 100 * (C) / [B] C = MS/LCS Result D = MSD/LCSD % Rec
Log Difference Log Diff. = Log(Sample Duplicate) - Log(Original Sample) E = MSD/LCSD Result

QC Summary 625760

LT Environmental, Inc.

Ross Draw 30-31

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B

Seq Number: 3090589 Matrix: Solid Date Prep: 05.29.19

MB Sample Id: 7678775-1-BLK LCS Sample Id: 7678775-1-BKS LCSD Sample Id: 7678775-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.0998	0.0975	98	0.0957	96	70-130	2	35	mg/kg	05.29.19 21:32	
Toluene	<0.00200	0.0998	0.101	101	0.0983	98	70-130	3	35	mg/kg	05.29.19 21:32	
Ethylbenzene	<0.00200	0.0998	0.112	112	0.109	109	70-130	3	35	mg/kg	05.29.19 21:32	
m,p-Xylenes	<0.00399	0.200	0.239	120	0.232	116	70-130	3	35	mg/kg	05.29.19 21:32	
o-Xylene	<0.00200	0.0998	0.116	116	0.112	112	70-130	4	35	mg/kg	05.29.19 21:32	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	103		90		90		70-130	%	05.29.19 21:32
4-Bromofluorobenzene	108		104		103		70-130	%	05.29.19 21:32

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B

Seq Number: 3090589 Matrix: Soil Date Prep: 05.29.19

Parent Sample Id: 625759-001 MS Sample Id: 625759-001 S MSD Sample Id: 625759-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00202	0.101	0.0766	76	0.0705	71	70-130	8	35	mg/kg	05.29.19 22:10	
Toluene	<0.00202	0.101	0.0825	82	0.0711	72	70-130	15	35	mg/kg	05.29.19 22:10	
Ethylbenzene	<0.00202	0.101	0.0871	86	0.0729	73	70-130	18	35	mg/kg	05.29.19 22:10	
m,p-Xylenes	0.00370	0.202	0.190	92	0.160	79	70-130	17	35	mg/kg	05.29.19 22:10	
o-Xylene	<0.00202	0.101	0.0929	92	0.0772	78	70-130	18	35	mg/kg	05.29.19 22:10	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	91		92		70-130	%	05.29.19 22:10
4-Bromofluorobenzene	114		109		70-130	%	05.29.19 22:10

MS/MSD Percent Recovery [D] = 100*(C-A) / B LCS = Laboratory Control Sample MS = Matrix Spike

Relative Percent Difference RPD = 200* | (C-E) / (C+E) | A = Parent Result B = Spike Added

LCS/LCSD Recovery [D] = 100 * (C) / [B] C = MS/LCS Result D = MSD/LCSD % Rec

Log Difference Log Diff. = Log(Sample Duplicate) - Log(Original Sample) E = MSD/LCSD Result

Chain of Custody

XENCO LABORATORIES

Houston,TX (281) 240-4200 Dallas,TX (214) 902-0300 San Antonio,TX (210) 509-3334
Midland,TX (432-704-5440) EL Paso,TX (915)585-3443 Lubbock,TX (806)794-1296
Hobbs,NM (575-392-7550) Phoenix,AZ (480-355-0900) Atlanta,GA (770-449-8800) Tampa,FL (813-620-2000)

Work Order No: 619570

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Project Manager:	Dan Moir	Bill to: (if different)	Kyle Littrell
Company Name:	LT Environmental, Inc., Permian office	Company Name:	XTO
Address:	3300 North A Street	Address:	
City, State ZIP:	Midland, TX 79705	City, State ZIP:	Midland, Tx 79705
Phone:	432.704.5178 Email:	Ggreen@Ltenv.com	

Work Order Comments

Program: UST/PST ☐ PRP ☐ Brownfields ☐ RC ☐ Superfund ☐
State of Project:
Reporting:Level II ☐ Level III ☐ PST/UST ☐ TRRP ☐ Level IV ☐
Deliverables: EDD ☐ ADaPT ☐ Other:

Project Name:	Ross Draw 30-31	Turn Around	
Project Number:		Routine ☐	
P.O. Number:	2RP-5330	Rush: Yes	
Sampler's Name:	Garrett Green	Due Date: 5/30	

SAMPLE RECEIPT				
Temp Blank:	Yes (No)	Wet Ice:	(Yes) No	
Temperature (°C):	0.4 | 0.4	Thermometer ID	IR	
Received Intact:	(Yes) No			
Cooler Custody Seals:	Yes No N/A	Correction Factor:	-0.2	
Sample Custody Seals:	Yes (No) N/A	Total Containers:		

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 0=8021)	Chloride (EPA 300.0)
SS02A	S	5/20/19	1450	3'	1	X	X	X
SS03A	S	5/20/19	1510	4'	1	X	X	X

ANALYSIS REQUEST

Work Order Notes

TAT starts the day recevied by the lab, if received by 4:30pm

Sample Comments

Total 200.7 / 6010 200.8 / 6020: 8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO2 Na Sr Tl Sn U V Zn

Circle Method(s) and Metal(s) to be analyzed **TCLP / SPLP 6010**: 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Tl U **1631 / 245.1 / 7470 / 7471** : Hg

	Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1	Garrett Green		05/28/19 11:00	2		05/28/19 12:20
3				4		5/29/19
5				6		125

Revised Date 051418 Rev. 2018.1

Final 1.001

XENCO Laboratories
Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 05/29/2019 12:15:00 PM

Work Order #: 625760

Acceptable Temperature Range: 0 - 6 degC
Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : R8

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	.4
#2 *Shipping container in good condition?	**Yes**
#3 *Samples received on ice?	**Yes**
#4 *Custody Seals intact on shipping container/ cooler?	**N/A**
#5 Custody Seals intact on sample bottles?	**N/A**
#6*Custody Seals Signed and dated?	**N/A**
#7 *Chain of Custody present?	**Yes**
#8 Any missing/extra samples?	**No**
#9 Chain of Custody signed when relinquished/ received?	**Yes**
#10 Chain of Custody agrees with sample labels/matrix?	**Yes**
#11 Container label(s) legible and intact?	**Yes**
#12 Samples in proper container/ bottle?	**Yes**
#13 Samples properly preserved?	**Yes**
#14 Sample container(s) intact?	**Yes**
#15 Sufficient sample amount for indicated test(s)?	**Yes**
#16 All samples received within hold time?	**Yes**
#17 Subcontract of sample(s)?	**N/A**
#18 Water VOC samples have zero headspace?	**N/A**

*** Must be completed for after-hours delivery of samples prior to placing in the refrigerator**

Analyst: PH Device/Lot#:

Checklist completed by: Brianna Teel Date: 05/29/2019

Brianna Teel

Checklist reviewed by: Kalei Stout Date: 05/29/2019

Kalei Stout

Analytical Report 625761

for

LT Environmental, Inc.

Project Manager: Dan Moir

Ross Draw 30-31

05-JUN-19

Collected By: Client

1211 W. Florida Ave
Midland TX 79701

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-19-29), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)
Oklahoma (2017-142)

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (T104704295-19-19), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-18-14)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-19-20)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-18-18)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-18-4)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)
Xenco-Atlanta (LELAP Lab ID #04176)
Xenco-Tampa: Florida (E87429), North Carolina (483)

05-JUN-19

Project Manager: **Dan Moir**
LT Environmental, Inc.
4600 W. 60th Avenue
Arvada, CO 80003

Reference: XENCO Report No(s): **625761**
Ross Draw 30-31
Project Address: Delaware Basin

Dan Moir:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 625761. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. The uncertainty of measurement associated with the results of analysis reported is available upon request. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 625761 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting XENCO Laboratories to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

Jessica Kramer

Jessica Kramer
Project Assistant

Sample Cross Reference 625761

LT Environmental, Inc., Arvada, CO

Ross Draw 30-31

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SS01A	S	05-24-19 11:50	3 ft	625761-001
SS04A	S	05-24-19 12:30	4 ft	625761-002

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3090594 BTEX by EPA 8021B

Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Certificate of Analysis Summary 625761

LT Environmental, Inc., Arvada, CO

Project Name: Ross Draw 30-31

Project Id:
Contact: Dan Moir
Project Location: Delaware Basin

Date Received in Lab: Wed May-29-19 12:15 pm
Report Date: 05-JUN-19
Project Manager: Jessica Kramer

Analysis Requested									
	Lab Id:	625761-001		625761-002					
	Field Id:	SS01A		SS04A					
	Depth:	3- ft		4- ft					
	Matrix:	SOIL		SOIL					
	Sampled:	May-24-19 11:50		May-24-19 12:30					
BTEX by EPA 8021B	***Extracted:***	May-29-19 14:30		May-29-19 14:30					
	Analyzed:	May-29-19 23:32		May-29-19 23:51					
	Units/RL:	mg/kg	RL	mg/kg	RL				
Benzene		<0.00200	0.00200	<0.00198	0.00198				
Toluene		<0.00200	0.00200	<0.00198	0.00198				
Ethylbenzene		<0.00200	0.00200	<0.00198	0.00198				
m,p-Xylenes		<0.00399	0.00399	0.00840	0.00397				
o-Xylene		<0.00200	0.00200	0.00341	0.00198				
Total Xylenes		<0.00200	0.00200	0.0118	0.00198				
Total BTEX		<0.00200	0.00200	0.0118	0.00198				
Chloride by EPA 300	***Extracted:***	May-29-19 15:30		May-29-19 15:30					
	Analyzed:	May-29-19 20:01		May-29-19 20:09					
	Units/RL:	mg/kg	RL	mg/kg	RL				
Chloride		69.7	50.5	65.5	25.1				
TPH by SW8015 Mod	***Extracted:***	May-29-19 17:00		Jun-01-19 08:00					
	Analyzed:	May-30-19 02:54		Jun-01-19 20:26					
	Units/RL:	mg/kg	RL	mg/kg	RL				
Gasoline Range Hydrocarbons (GRO)		<15.0	15.0	<15.0	15.0				
Diesel Range Organics (DRO)		60.0	15.0	70.9	15.0				
Motor Oil Range Hydrocarbons (MRO)		<15.0	15.0	<15.0	15.0				
Total TPH		60.0	15.0	70.9	15.0				
Total GRO-DRO		60.0	15.0	70.9	15.0				

Jessica Kramer
Project Assistant

Certificate of Analytical Results 625761

LT Environmental, Inc., Arvada, CO

Ross Draw 30-31

Sample Id:	**SS01A**	Matrix:	Soil	Date Received:	05.29.19 12.15
Lab Sample Id:	625761-001	Date Collected:	05.24.19 11.50	Sample Depth:	3 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	05.29.19 15.30	Basis:	Wet Weight
Seq Number:	3090539				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**69.7**	50.5	mg/kg	05.29.19 20.01		10

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	05.29.19 17.00	Basis:	Wet Weight
Seq Number:	3090591				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	05.30.19 02.54	U	1
Diesel Range Organics (DRO)	C10C28DRO	**60.0**	15.0	mg/kg	05.30.19 02.54		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	05.30.19 02.54	U	1
Total TPH	PHC635	**60.0**	15.0	mg/kg	05.30.19 02.54		1
Total GRO-DRO	PHC628	**60.0**	15.0	mg/kg	05.30.19 02.54		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	94	%	70-135	05.30.19 02.54	
o-Terphenyl	84-15-1	93	%	70-135	05.30.19 02.54	

Certificate of Analytical Results 625761

LT Environmental, Inc., Arvada, CO

Ross Draw 30-31

Sample Id:	**SS01A**	Matrix:	Soil	Date Received:	05.29.19 12.15
Lab Sample Id:	625761-001	Date Collected:	05.24.19 11.50	Sample Depth:	3 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	05.29.19 14.30	Basis:	Wet Weight
Seq Number:	3090594				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	05.29.19 23.32	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	05.29.19 23.32	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	05.29.19 23.32	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	05.29.19 23.32	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	05.29.19 23.32	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	05.29.19 23.32	U	1
Total BTEX		<0.00200	0.00200	mg/kg	05.29.19 23.32	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	97	%	70-130	05.29.19 23.32	
1,4-Difluorobenzene	540-36-3	99	%	70-130	05.29.19 23.32	

Certificate of Analytical Results 625761

LT Environmental, Inc., Arvada, CO

Ross Draw 30-31

Sample Id:	**SS04A**	Matrix:	Soil	Date Received:	05.29.19 12.15
Lab Sample Id:	625761-002	Date Collected:	05.24.19 12.30	Sample Depth:	4 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	05.29.19 15.30	Basis:	Wet Weight
Seq Number:	3090539				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**65.5**	25.1	mg/kg	05.29.19 20.09		5

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	06.01.19 08.00	Basis:	Wet Weight
Seq Number:	3090918				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	06.01.19 20.26	U	1
Diesel Range Organics (DRO)	C10C28DRO	**70.9**	15.0	mg/kg	06.01.19 20.26		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	06.01.19 20.26	U	1
Total TPH	PHC635	**70.9**	15.0	mg/kg	06.01.19 20.26		1
Total GRO-DRO	PHC628	**70.9**	15.0	mg/kg	06.01.19 20.26		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	97	%	70-135	06.01.19 20.26	
o-Terphenyl	84-15-1	97	%	70-135	06.01.19 20.26	

Certificate of Analytical Results 625761

LT Environmental, Inc., Arvada, CO

Ross Draw 30-31

Sample Id:	**SS04A**	Matrix:	Soil	Date Received:	05.29.19 12.15
Lab Sample Id:	625761-002	Date Collected:	05.24.19 12.30	Sample Depth:	4 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	05.29.19 14.30	Basis:	Wet Weight
Seq Number:	3090594				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	05.29.19 23.51	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	05.29.19 23.51	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	05.29.19 23.51	U	1
m,p-Xylenes	179601-23-1	**0.00840**	0.00397	mg/kg	05.29.19 23.51		1
o-Xylene	95-47-6	**0.00341**	0.00198	mg/kg	05.29.19 23.51		1
Total Xylenes	1330-20-7	**0.0118**	0.00198	mg/kg	05.29.19 23.51		1
Total BTEX		**0.0118**	0.00198	mg/kg	05.29.19 23.51		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	96	%	70-130	05.29.19 23.51	
1,4-Difluorobenzene	540-36-3	99	%	70-130	05.29.19 23.51	

Flagging Criteria

X In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.

B A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.

D The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.

E The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.

F RPD exceeded lab control limits.

J The target analyte was positively identified below the quantitation limit and above the detection limit.

U Analyte was not detected.

L The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.

H The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.

K Sample analyzed outside of recommended hold time.

JN A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

MDL Method Detection Limit **SDL** Sample Detection Limit **LOD** Limit of Detection

PQL Practical Quantitation Limit **MQL** Method Quantitation Limit **LOQ** Limit of Quantitation

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

BKS/LCS Blank Spike/Laboratory Control Sample **BKSD/LCSD** Blank Spike Duplicate/Laboratory Control Sample Duplicate

MD/SD Method Duplicate/Sample Duplicate **MS** Matrix Spike **MSD:** Matrix Spike Duplicate

+ NELAC certification not offered for this compound.

***** (Next to analyte name or method description) = Outside XENCO's scope of NELAC accreditation

QC Summary 625761

LT Environmental, Inc.

Ross Draw 30-31

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3090539 Matrix: Solid Date Prep: 05.29.19
MB Sample Id: 7678781-1-BLK LCS Sample Id: 7678781-1-BKS LCSD Sample Id: 7678781-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<5.00	250	230	92	232	93	90-110	1	20	mg/kg	05.29.19 19:18	

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3090539 Matrix: Soil Date Prep: 05.29.19
Parent Sample Id: 625762-001 MS Sample Id: 625762-001 S MSD Sample Id: 625762-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	10.2	252	263	100	263	100	90-110	0	20	mg/kg	05.29.19 19:40	

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3090539 Matrix: Soil Date Prep: 05.29.19
Parent Sample Id: 625764-007 MS Sample Id: 625764-007 S MSD Sample Id: 625764-007 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	8.89	281	284	98	286	99	90-110	1	20	mg/kg	05.29.19 21:21	

Analytical Method: **TPH by SW8015 Mod** Prep Method: TX1005P
Seq Number: 3090591 Matrix: Solid Date Prep: 05.29.19
MB Sample Id: 7678858-1-BLK LCS Sample Id: 7678858-1-BKS LCSD Sample Id: 7678858-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	13.1	1000	1090	109	1100	110	70-135	1	20	mg/kg	05.29.19 21:26	
Diesel Range Organics (DRO)	10.9	1000	1010	101	1010	101	70-135	0	20	mg/kg	05.29.19 21:26	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	99		120		123		70-135	%	05.29.19 21:26
o-Terphenyl	100		114		116		70-135	%	05.29.19 21:26

MS/MSD Percent Recovery [D] = 100*(C-A) / B LCS = Laboratory Control Sample MS = Matrix Spike
Relative Percent Difference RPD = 200* | (C-E) / (C+E) | A = Parent Result B = Spike Added
LCS/LCSD Recovery [D] = 100 * (C) / [B] C = MS/LCS Result D = MSD/LCSD % Rec
Log Difference Log Diff. = Log(Sample Duplicate) - Log(Original Sample) E = MSD/LCSD Result

QC Summary 625761

LT Environmental, Inc.

Ross Draw 30-31

Analytical Method: **TPH by SW8015 Mod** Prep Method: TX1005P
Seq Number: 3090918 Matrix: Solid Date Prep: 06.01.19
MB Sample Id: 7679064-1-BLK LCS Sample Id: 7679064-1-BKS LCSD Sample Id: 7679064-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<8.00	1000	1170	117	1200	120	70-135	3	20	mg/kg	06.01.19 12:31	
Diesel Range Organics (DRO)	<8.13	1000	1140	114	1170	117	70-135	3	20	mg/kg	06.01.19 12:31	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	96		124		122		70-135	%	06.01.19 12:31
o-Terphenyl	96		103		105		70-135	%	06.01.19 12:31

Analytical Method: **TPH by SW8015 Mod** Prep Method: TX1005P
Seq Number: 3090591 Matrix: Soil Date Prep: 05.29.19
Parent Sample Id: 625763-001 MS Sample Id: 625763-001 S MSD Sample Id: 625763-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	13.9	1000	1100	109	1100	109	70-135	0	20	mg/kg	05.29.19 22:24	
Diesel Range Organics (DRO)	238	1000	1140	90	1150	91	70-135	1	20	mg/kg	05.29.19 22:24	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	118		114		70-135	%	05.29.19 22:24
o-Terphenyl	113		105		70-135	%	05.29.19 22:24

Analytical Method: **TPH by SW8015 Mod** Prep Method: TX1005P
Seq Number: 3090918 Matrix: Soil Date Prep: 06.01.19
Parent Sample Id: 625765-001 MS Sample Id: 625765-001 S MSD Sample Id: 625765-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	835	996	1740	91	1720	89	70-135	1	20	mg/kg	06.01.19 13:30	
Diesel Range Organics (DRO)	1200	996	2070	87	2050	85	70-135	1	20	mg/kg	06.01.19 13:30	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	128		113		70-135	%	06.01.19 13:30
o-Terphenyl	100		95		70-135	%	06.01.19 13:30

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

[D] = 100*(C-A) / B
RPD = 200* | (C-E) / (C+E) |
[D] = 100 * (C) / [B]
Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
A = Parent Result
C = MS/LCS Result
E = MSD/LCSD Result

MS = Matrix Spike
B = Spike Added
D = MSD/LCSD % Rec

QC Summary 625761

LT Environmental, Inc.

Ross Draw 30-31

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B

Seq Number: 3090594 Matrix: Solid Date Prep: 05.29.19

MB Sample Id: 7678786-1-BLK LCS Sample Id: 7678786-1-BKS LCSD Sample Id: 7678786-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.000387	0.101	0.107	106	0.110	110	70-130	3	35	mg/kg	05.29.19 21:40	
Toluene	<0.000458	0.101	0.0993	98	0.101	101	70-130	2	35	mg/kg	05.29.19 21:40	
Ethylbenzene	<0.000568	0.101	0.105	104	0.106	106	70-130	1	35	mg/kg	05.29.19 21:40	
m,p-Xylenes	<0.00102	0.201	0.215	107	0.220	111	70-130	2	35	mg/kg	05.29.19 21:40	
o-Xylene	<0.000346	0.101	0.106	105	0.109	109	70-130	3	35	mg/kg	05.29.19 21:40	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	92		103		106		70-130	%	05.29.19 21:40
4-Bromofluorobenzene	81		95		103		70-130	%	05.29.19 21:40

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B

Seq Number: 3090594 Matrix: Soil Date Prep: 05.29.19

Parent Sample Id: 625761-001 MS Sample Id: 625761-001 S MSD Sample Id: 625761-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.000385	0.100	0.0958	96	0.0952	95	70-130	1	35	mg/kg	05.29.19 22:18	
Toluene	<0.000456	0.100	0.0854	85	0.0837	84	70-130	2	35	mg/kg	05.29.19 22:18	
Ethylbenzene	<0.000565	0.100	0.0831	83	0.0803	80	70-130	3	35	mg/kg	05.29.19 22:18	
m,p-Xylenes	<0.00101	0.200	0.169	85	0.162	81	70-130	4	35	mg/kg	05.29.19 22:18	
o-Xylene	<0.000344	0.100	0.0838	84	0.0808	81	70-130	4	35	mg/kg	05.29.19 22:18	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	104		106		70-130	%	05.29.19 22:18
4-Bromofluorobenzene	99		104		70-130	%	05.29.19 22:18

MS/MSD Percent Recovery [D] = 100*(C-A) / B LCS = Laboratory Control Sample MS = Matrix Spike

Relative Percent Difference RPD = 200* | (C-E) / (C+E) | A = Parent Result B = Spike Added

LCS/LCSD Recovery [D] = 100 * (C) / [B] C = MS/LCS Result D = MSD/LCSD % Rec

Log Difference Log Diff. = Log(Sample Duplicate) - Log(Original Sample) E = MSD/LCSD Result

Chain of Custody

XENCO LABORATORIES

Houston,TX (281) 240-4200 Dallas,TX (214) 902-0300 San Antonio,TX (210) 509-3334
Midland,TX (432-704-5440) EL Paso,TX (915)585-3443 Lubbock,TX (806)794-1296
Hobbs,NM (575-392-7550) Phoenix,AZ (480-355-0900) Atlanta,GA (770-449-8800) Tampa,FL (813-620-2000)

Work Order No: 625701

www.xenco.com Page 1 of 1

Project Manager:	Dan Moir	Bill to: (if different)	Kyle Littrell
Company Name:	LT Environmental, Inc., Permian office	Company Name:	XTO
Address:	3300 North A Street	Address:	
City, State ZIP:	Midland, TX 79705	City, State ZIP:	Midland, Tx 79705
Phone:	432.704.5178 Email:		Ggreen@Ltenv.com

Work Order Comments

Program: UST/PST ☐ PRP ☐ Brownfields ☐ RC ☐ Superfund ☐
State of Project:
Reporting:Level II ☐ Level III ☐ PST/UST ☐ TRRP ☐ Level IV ☐
Deliverables: EDD ☐ ADaPT ☐ Other:

Project Name:	Ross Draw 30-31	Turn Around	
Project Number:		Routine ☐	
P.O. Number:	2RP-5330	Rush: Yes	
Sampler's Name:	Garrett Green	Due Date: 5/30	

SAMPLE RECEIPT			
Temp Blank:	Yes (No)	Wet Ice:	(Yes) No
Temperature (°C):	0.6 | 0.4	Thermometer ID	
Received Intact:	(Yes) No		
Cooler Custody Seals:	Yes No N/A	Correction Factor:	-0.2
Sample Custody Seals:	Yes (No) N/A	Total Containers:	

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 0=8021)	Chloride (EPA 300.0)
SS01A	S	5/24/19	1150	3'	1	X	X	X
SS04A	S	5/24/19	1230	4'	1	X	X	X

ANALYSIS REQUEST

Work Order Notes

TAT starts the day recevied by the lab, if received by 4:30pm

Sample Comments

Total 200.7 / 6010 200.8 / 6020: 8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO2 Na Sr Tl Sn U V Zn

Circle Method(s) and Metal(s) to be analyzed **TCLP / SPLP 6010**: 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Tl U **1631 / 245.1 / 7470 / 7471** : Hg

	Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1			05/28/2019 11:00	2		05/29/19 12:45
3				4		
5				6		

Revised Date 051418 Rev. 2018.1

Final 1.001

Page 14 of 15

XENCO Laboratories
Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 05/29/2019 12:15:00 PM

Work Order #: 625761

Acceptable Temperature Range: 0 - 6 degC
Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : R8

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	.4
#2 *Shipping container in good condition?	**Yes**
#3 *Samples received on ice?	**Yes**
#4 *Custody Seals intact on shipping container/ cooler?	**N/A**
#5 Custody Seals intact on sample bottles?	**N/A**
#6*Custody Seals Signed and dated?	**N/A**
#7 *Chain of Custody present?	**Yes**
#8 Any missing/extra samples?	**No**
#9 Chain of Custody signed when relinquished/ received?	**Yes**
#10 Chain of Custody agrees with sample labels/matrix?	**Yes**
#11 Container label(s) legible and intact?	**Yes**
#12 Samples in proper container/ bottle?	**Yes**
#13 Samples properly preserved?	**Yes**
#14 Sample container(s) intact?	**Yes**
#15 Sufficient sample amount for indicated test(s)?	**Yes**
#16 All samples received within hold time?	**Yes**
#17 Subcontract of sample(s)?	**N/A**
#18 Water VOC samples have zero headspace?	**N/A**

*** Must be completed for after-hours delivery of samples prior to placing in the refrigerator**

Analyst: PH Device/Lot#:

Checklist completed by: Brianna Teel Date: 05/29/2019

Brianna Teel

Checklist reviewed by: Kalei Stout Date: 05/29/2019

Kalei Stout

Analytical Report 631828

for

LT Environmental, Inc.

Project Manager: Dan Moir

Ross Draw 3031

3/10/2019

25-JUL-19

Collected By: Client

1211 W. Florida Ave
Midland TX 79701

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-19-29), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)
Oklahoma (2017-142)

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (T104704295-19-19), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-18-14)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-19-20)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-18-18)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-18-4)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)
Xenco-Atlanta (LELAP Lab ID #04176)
Xenco-Tampa: Florida (E87429), North Carolina (483)

25-JUL-19

Project Manager: **Dan Moir**
LT Environmental, Inc.
4600 W. 60th Avenue
Arvada, CO 80003

Reference: XENCO Report No(s): **631828**
Ross Draw 3031
Project Address: Eddy County

Dan Moir:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 631828. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. The uncertainty of measurement associated with the results of analysis reported is available upon request. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 631828 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting XENCO Laboratories to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

Jessica Kramer

Jessica Kramer
Project Assistant

Sample Cross Reference 631828

LT Environmental, Inc., Arvada, CO

Ross Draw 3031

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
FS01	S	07-19-19 11:04	0.5 ft	631828-001
FS02	S	07-19-19 11:24	0.8 ft	631828-002
FS03	S	07-19-19 12:08	0.5 ft	631828-003
FS04	S	07-19-19 13:00	0.5 ft	631828-004
FS05	S	07-19-19 13:01	0.5 ft	631828-005
FS06	S	07-19-19 15:25	0.5 ft	631828-006
FS07	S	07-19-19 15:37	0.5 ft	631828-007

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3096439 TPH by SW8015 Mod
Surrogate o-Terphenyl recovered below QC limits. Matrix interferences is suspected.
Samples affected are: 631828-003,631828-007,631828-005.

Batch: LBA-3096465 BTEX by EPA 8021B
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.
Surrogate 4-Bromofluorobenzene recovered above QC limits. Matrix interferences is suspected; data confirmed by re-analysis.
Samples affected are: 631827-002 S.

Certificate of Analysis Summary 631828

LT Environmental, Inc., Arvada, CO

Project Name: Ross Draw 3031

Project Id: 3/10/2019
Contact: Dan Moir
Project Location: Eddy County

Date Received in Lab: Wed Jul-24-19 11:45 am
Report Date: 25-JUL-19
Project Manager: Jessica Kramer

Analysis Requested													
	Lab Id:	631828-001		631828-002		631828-003		631828-004		631828-005		631828-006	
	Field Id:	FS01		FS02		FS03		FS04		FS05		FS06	
	Depth:	0.5- ft		0.8- ft		0.5- ft		0.5- ft		0.5- ft		0.5- ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Jul-19-19 11:04		Jul-19-19 11:24		Jul-19-19 12:08		Jul-19-19 13:00		Jul-19-19 13:01		Jul-19-19 15:25	
BTEX by EPA 8021B	***Extracted:***	Jul-24-19 13:20		Jul-24-19 13:20		Jul-24-19 13:20		Jul-24-19 13:20		Jul-24-19 13:20		Jul-24-19 13:20	
	Analyzed:	Jul-25-19 07:00		Jul-25-19 07:20		Jul-25-19 07:40		Jul-25-19 12:40		Jul-25-19 08:20		Jul-25-19 08:41	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		<0.00199	0.00199	<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200
Toluene		0.00248	0.00199	<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200
Ethylbenzene		<0.00199	0.00199	<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200
m,p-Xylenes		0.00574	0.00398	<0.00401	0.00401	0.00443	0.00399	<0.00400	0.00400	<0.00400	0.00400	<0.00401	0.00401
o-Xylene		0.00199	0.00199	<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200
Total Xylenes		0.00773	0.00199	<0.00200	0.00200	0.00443	0.00200	<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200
Total BTEX		0.0102	0.00199	<0.00200	0.00200	0.00443	0.00200	<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200
Chloride by EPA 300	***Extracted:***	Jul-24-19 15:00		Jul-24-19 15:00		Jul-24-19 15:00		Jul-24-19 15:00		Jul-24-19 15:00		Jul-24-19 15:00	
	Analyzed:	Jul-25-19 01:45		Jul-25-19 02:24		Jul-25-19 02:33		Jul-25-19 03:02		Jul-25-19 03:12		Jul-25-19 03:21	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		563	25.2	313	25.0	1100	24.9	92.0	25.1	53.4	25.0	449	25.1
TPH by SW8015 Mod	***Extracted:***	Jul-24-19 17:00		Jul-24-19 17:00		Jul-24-19 17:00		Jul-24-19 17:00		Jul-24-19 17:00		Jul-24-19 17:00	
	Analyzed:	Jul-25-19 09:53		Jul-25-19 04:34		Jul-25-19 04:58		Jul-25-19 05:22		Jul-25-19 05:46		Jul-25-19 06:09	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		80.5	74.9	<14.9	14.9	<15.0	15.0	<15.0	15.0	<15.0	15.0	<14.9	14.9
Diesel Range Organics (DRO)		7050	74.9	750	14.9	97.9	15.0	749	15.0	29.0	15.0	247	14.9
Motor Oil Range Hydrocarbons (MRO)		436	74.9	62.3	14.9	17.8	15.0	42.0	15.0	<15.0	15.0	18.4	14.9
Total TPH		7570	74.9	812	14.9	116	15.0	791	15.0	29.0	15.0	265	14.9
Total GRO-DRO		7130	74.9	750	14.9	97.9	15.0	749	15.0	29.0	15.0	247	14.9

Jessica Kramer
Project Assistant

Certificate of Analysis Summary 631828

LT Environmental, Inc., Arvada, CO

Project Name: Ross Draw 3031

Project Id: 3/10/2019
Contact: Dan Moir
Project Location: Eddy County

Date Received in Lab: Wed Jul-24-19 11:45 am
Report Date: 25-JUL-19
Project Manager: Jessica Kramer

Analysis Requested							
	Lab Id:	631828-007					
	Field Id:	FS07					
	Depth:	0.5- ft					
	Matrix:	SOIL					
	Sampled:	Jul-19-19 15:37					
BTEX by EPA 8021B	***Extracted:***	Jul-24-19 13:20					
	Analyzed:	Jul-25-19 09:01					
	Units/RL:	mg/kg	RL				
Benzene		<0.00201	0.00201				
Toluene		<0.00201	0.00201				
Ethylbenzene		<0.00201	0.00201				
m,p-Xylenes		<0.00402	0.00402				
o-Xylene		<0.00201	0.00201				
Total Xylenes		<0.00201	0.00201				
Total BTEX		<0.00201	0.00201				
Chloride by EPA 300	***Extracted:***	Jul-24-19 15:00					
	Analyzed:	Jul-25-19 03:31					
	Units/RL:	mg/kg	RL				
Chloride		235	25.2				
TPH by SW8015 Mod	***Extracted:***	Jul-24-19 17:00					
	Analyzed:	Jul-25-19 06:33					
	Units/RL:	mg/kg	RL				
Gasoline Range Hydrocarbons (GRO)		<15.0	15.0				
Diesel Range Organics (DRO)		46.1	15.0				
Motor Oil Range Hydrocarbons (MRO)		<15.0	15.0				
Total TPH		46.1	15.0				
Total GRO-DRO		46.1	15.0				

Jessica Kramer
Project Assistant

Certificate of Analytical Results 631828

LT Environmental, Inc., Arvada, CO

Ross Draw 3031

Sample Id:	**FS01**	Matrix:	Soil	Date Received:	07.24.19 11.45
Lab Sample Id:	631828-001	Date Collected:	07.19.19 11.04	Sample Depth:	0.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	07.24.19 15.00	Basis:	Wet Weight
Seq Number:	3096414				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**563**	25.2	mg/kg	07.25.19 01.45		5

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	07.24.19 17.00	Basis:	Wet Weight
Seq Number:	3096439				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	**80.5**	74.9	mg/kg	07.25.19 09.53		5
Diesel Range Organics (DRO)	C10C28DRO	**7050**	74.9	mg/kg	07.25.19 09.53		5
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**436**	74.9	mg/kg	07.25.19 09.53		5
Total TPH	PHC635	**7570**	74.9	mg/kg	07.25.19 09.53		5
Total GRO-DRO	PHC628	**7130**	74.9	mg/kg	07.25.19 09.53		5

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	88	%	70-135	07.25.19 09.53	
o-Terphenyl	84-15-1	171	%	70-135	07.25.19 09.53	**

Certificate of Analytical Results 631828

LT Environmental, Inc., Arvada, CO

Ross Draw 3031

Sample Id:	**FS01**	Matrix:	Soil	Date Received:	07.24.19 11.45
Lab Sample Id:	631828-001	Date Collected:	07.19.19 11.04	Sample Depth:	0.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALG			% Moisture:	
Analyst:	FOV	Date Prep:	07.24.19 13.20	Basis:	Wet Weight
Seq Number:	3096465				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	07.25.19 07.00	U	1
Toluene	108-88-3	**0.00248**	0.00199	mg/kg	07.25.19 07.00		1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	07.25.19 07.00	U	1
m,p-Xylenes	179601-23-1	**0.00574**	0.00398	mg/kg	07.25.19 07.00		1
o-Xylene	95-47-6	**0.00199**	0.00199	mg/kg	07.25.19 07.00		1
Total Xylenes	1330-20-7	**0.00773**	0.00199	mg/kg	07.25.19 07.00		1
Total BTEX		**0.0102**	0.00199	mg/kg	07.25.19 07.00		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	86	%	70-130	07.25.19 07.00	
1,4-Difluorobenzene	540-36-3	89	%	70-130	07.25.19 07.00	

Certificate of Analytical Results 631828

LT Environmental, Inc., Arvada, CO

Ross Draw 3031

Sample Id:	**FS02**	Matrix:	Soil	Date Received:	07.24.19 11.45
Lab Sample Id:	631828-002	Date Collected:	07.19.19 11.24	Sample Depth:	0.8 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	07.24.19 15.00	Basis:	Wet Weight
Seq Number:	3096414				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**313**	25.0	mg/kg	07.25.19 02.24		5

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	07.24.19 17.00	Basis:	Wet Weight
Seq Number:	3096439				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<14.9	14.9	mg/kg	07.25.19 04.34	U	1
Diesel Range Organics (DRO)	C10C28DRO	**750**	14.9	mg/kg	07.25.19 04.34		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**62.3**	14.9	mg/kg	07.25.19 04.34		1
Total TPH	PHC635	**812**	14.9	mg/kg	07.25.19 04.34		1
Total GRO-DRO	PHC628	**750**	14.9	mg/kg	07.25.19 04.34		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	87	%	70-135	07.25.19 04.34	
o-Terphenyl	84-15-1	84	%	70-135	07.25.19 04.34	

Certificate of Analytical Results 631828

LT Environmental, Inc., Arvada, CO

Ross Draw 3031

Sample Id:	**FS02**	Matrix:	Soil	Date Received:	07.24.19 11.45
Lab Sample Id:	631828-002	Date Collected:	07.19.19 11.24	Sample Depth:	0.8 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALG			% Moisture:	
Analyst:	FOV	Date Prep:	07.24.19 13.20	Basis:	Wet Weight
Seq Number:	3096465				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	07.25.19 07.20	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	07.25.19 07.20	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	07.25.19 07.20	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	07.25.19 07.20	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	07.25.19 07.20	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	07.25.19 07.20	U	1
Total BTEX		<0.00200	0.00200	mg/kg	07.25.19 07.20	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	100	%	70-130	07.25.19 07.20	
4-Bromofluorobenzene	460-00-4	122	%	70-130	07.25.19 07.20	

Certificate of Analytical Results 631828

LT Environmental, Inc., Arvada, CO

Ross Draw 3031

Sample Id:	**FS03**	Matrix:	Soil	Date Received:	07.24.19 11.45
Lab Sample Id:	631828-003	Date Collected:	07.19.19 12.08	Sample Depth:	0.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	07.24.19 15.00	Basis:	Wet Weight
Seq Number:	3096414				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**1100**	24.9	mg/kg	07.25.19 02.33		5

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	07.24.19 17.00	Basis:	Wet Weight
Seq Number:	3096439				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	07.25.19 04.58	U	1
Diesel Range Organics (DRO)	C10C28DRO	**97.9**	15.0	mg/kg	07.25.19 04.58		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**17.8**	15.0	mg/kg	07.25.19 04.58		1
Total TPH	PHC635	**116**	15.0	mg/kg	07.25.19 04.58		1
Total GRO-DRO	PHC628	**97.9**	15.0	mg/kg	07.25.19 04.58		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	84	%	70-135	07.25.19 04.58	
o-Terphenyl	84-15-1	61	%	70-135	07.25.19 04.58	**

Certificate of Analytical Results 631828

LT Environmental, Inc., Arvada, CO

Ross Draw 3031

Sample Id:	**FS03**	Matrix:	Soil	Date Received:	07.24.19 11.45
Lab Sample Id:	631828-003	Date Collected:	07.19.19 12.08	Sample Depth:	0.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALG			% Moisture:	
Analyst:	FOV	Date Prep:	07.24.19 13.20	Basis:	Wet Weight
Seq Number:	3096465				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	07.25.19 07.40	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	07.25.19 07.40	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	07.25.19 07.40	U	1
m,p-Xylenes	179601-23-1	**0.00443**	0.00399	mg/kg	07.25.19 07.40		1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	07.25.19 07.40	U	1
Total Xylenes	1330-20-7	**0.00443**	0.00200	mg/kg	07.25.19 07.40		1
Total BTEX		**0.00443**	0.00200	mg/kg	07.25.19 07.40		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	100	%	70-130	07.25.19 07.40	
4-Bromofluorobenzene	460-00-4	100	%	70-130	07.25.19 07.40	

Certificate of Analytical Results 631828

LT Environmental, Inc., Arvada, CO

Ross Draw 3031

Sample Id:	**FS04**	Matrix:	Soil	Date Received:	07.24.19 11.45
Lab Sample Id:	631828-004	Date Collected:	07.19.19 13.00	Sample Depth:	0.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	07.24.19 15.00	Basis:	Wet Weight
Seq Number:	3096414				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**92.0**	25.1	mg/kg	07.25.19 03.02		5

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	07.24.19 17.00	Basis:	Wet Weight
Seq Number:	3096439				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	07.25.19 05.22	U	1
Diesel Range Organics (DRO)	C10C28DRO	**749**	15.0	mg/kg	07.25.19 05.22		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**42.0**	15.0	mg/kg	07.25.19 05.22		1
Total TPH	PHC635	**791**	15.0	mg/kg	07.25.19 05.22		1
Total GRO-DRO	PHC628	**749**	15.0	mg/kg	07.25.19 05.22		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	88	%	70-135	07.25.19 05.22	
o-Terphenyl	84-15-1	80	%	70-135	07.25.19 05.22	

Certificate of Analytical Results 631828

LT Environmental, Inc., Arvada, CO

Ross Draw 3031

Sample Id:	**FS04**	Matrix:	Soil	Date Received:	07.24.19 11.45
Lab Sample Id:	631828-004	Date Collected:	07.19.19 13.00	Sample Depth:	0.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALG			% Moisture:	
Analyst:	FOV	Date Prep:	07.24.19 13.20	Basis:	Wet Weight
Seq Number:	3096465				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	07.25.19 12.40	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	07.25.19 12.40	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	07.25.19 12.40	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	07.25.19 12.40	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	07.25.19 12.40	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	07.25.19 12.40	U	1
Total BTEX		<0.00200	0.00200	mg/kg	07.25.19 12.40	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	108	%	70-130	07.25.19 12.40	
1,4-Difluorobenzene	540-36-3	94	%	70-130	07.25.19 12.40	

Certificate of Analytical Results 631828

LT Environmental, Inc., Arvada, CO

Ross Draw 3031

Sample Id:	**FS05**	Matrix:	Soil	Date Received:	07.24.19 11.45
Lab Sample Id:	631828-005	Date Collected:	07.19.19 13.01	Sample Depth:	0.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	07.24.19 15.00	Basis:	Wet Weight
Seq Number:	3096414				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**53.4**	25.0	mg/kg	07.25.19 03.12		5

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	07.24.19 17.00	Basis:	Wet Weight
Seq Number:	3096439				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	07.25.19 05.46	U	1
Diesel Range Organics (DRO)	C10C28DRO	**29.0**	15.0	mg/kg	07.25.19 05.46		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	07.25.19 05.46	U	1
Total TPH	PHC635	**29.0**	15.0	mg/kg	07.25.19 05.46		1
Total GRO-DRO	PHC628	**29.0**	15.0	mg/kg	07.25.19 05.46		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	100	%	70-135	07.25.19 05.46	
o-Terphenyl	84-15-1	65	%	70-135	07.25.19 05.46	**

Certificate of Analytical Results 631828

LT Environmental, Inc., Arvada, CO

Ross Draw 3031

Sample Id:	**FS05**	Matrix:	Soil	Date Received:	07.24.19 11.45
Lab Sample Id:	631828-005	Date Collected:	07.19.19 13.01	Sample Depth:	0.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALG			% Moisture:	
Analyst:	FOV	Date Prep:	07.24.19 13.20	Basis:	Wet Weight
Seq Number:	3096465				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	07.25.19 08.20	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	07.25.19 08.20	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	07.25.19 08.20	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	07.25.19 08.20	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	07.25.19 08.20	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	07.25.19 08.20	U	1
Total BTEX		<0.00200	0.00200	mg/kg	07.25.19 08.20	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	109	%	70-130	07.25.19 08.20	
1,4-Difluorobenzene	540-36-3	102	%	70-130	07.25.19 08.20	

Certificate of Analytical Results 631828

LT Environmental, Inc., Arvada, CO

Ross Draw 3031

Sample Id:	**FS06**	Matrix:	Soil	Date Received:	07.24.19 11.45
Lab Sample Id:	631828-006	Date Collected:	07.19.19 15.25	Sample Depth:	0.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	07.24.19 15.00	Basis:	Wet Weight
Seq Number:	3096414				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**449**	25.1	mg/kg	07.25.19 03.21		5

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	07.24.19 17.00	Basis:	Wet Weight
Seq Number:	3096439				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<14.9	14.9	mg/kg	07.25.19 06.09	U	1
Diesel Range Organics (DRO)	C10C28DRO	**247**	14.9	mg/kg	07.25.19 06.09		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**18.4**	14.9	mg/kg	07.25.19 06.09		1
Total TPH	PHC635	**265**	14.9	mg/kg	07.25.19 06.09		1
Total GRO-DRO	PHC628	**247**	14.9	mg/kg	07.25.19 06.09		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	100	%	70-135	07.25.19 06.09	
o-Terphenyl	84-15-1	80	%	70-135	07.25.19 06.09	

Certificate of Analytical Results 631828

LT Environmental, Inc., Arvada, CO

Ross Draw 3031

Sample Id:	**FS06**	Matrix:	Soil	Date Received:	07.24.19 11.45
Lab Sample Id:	631828-006	Date Collected:	07.19.19 15.25	Sample Depth:	0.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALG			% Moisture:	
Analyst:	FOV	Date Prep:	07.24.19 13.20	Basis:	Wet Weight
Seq Number:	3096465				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	07.25.19 08.41	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	07.25.19 08.41	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	07.25.19 08.41	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	07.25.19 08.41	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	07.25.19 08.41	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	07.25.19 08.41	U	1
Total BTEX		<0.00200	0.00200	mg/kg	07.25.19 08.41	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	106	%	70-130	07.25.19 08.41	
1,4-Difluorobenzene	540-36-3	102	%	70-130	07.25.19 08.41	

Certificate of Analytical Results 631828

LT Environmental, Inc., Arvada, CO

Ross Draw 3031

Sample Id:	**FS07**	Matrix:	Soil	Date Received:	07.24.19 11.45
Lab Sample Id:	631828-007	Date Collected:	07.19.19 15.37	Sample Depth:	0.5 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	07.24.19 15.00	Basis:	Wet Weight
Seq Number:	3096414				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**235**	25.2	mg/kg	07.25.19 03.31		5

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	07.24.19 17.00	Basis:	Wet Weight
Seq Number:	3096439				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	07.25.19 06.33	U	1
Diesel Range Organics (DRO)	C10C28DRO	**46.1**	15.0	mg/kg	07.25.19 06.33		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	07.25.19 06.33	U	1
Total TPH	PHC635	**46.1**	15.0	mg/kg	07.25.19 06.33		1
Total GRO-DRO	PHC628	**46.1**	15.0	mg/kg	07.25.19 06.33		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	94	%	70-135	07.25.19 06.33	
o-Terphenyl	84-15-1	65	%	70-135	07.25.19 06.33	**

Certificate of Analytical Results 631828

LT Environmental, Inc., Arvada, CO

Ross Draw 3031

Sample Id:	**FS07**	Matrix:	Soil	Date Received:	07.24.19 11.45
Lab Sample Id:	631828-007	Date Collected:	07.19.19 15.37	Sample Depth:	0.5 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALG			% Moisture:	
Analyst:	FOV	Date Prep:	07.24.19 13.20	Basis:	Wet Weight
Seq Number:	3096465				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	07.25.19 09.01	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	07.25.19 09.01	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	07.25.19 09.01	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	07.25.19 09.01	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	07.25.19 09.01	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	07.25.19 09.01	U	1
Total BTEX		<0.00201	0.00201	mg/kg	07.25.19 09.01	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	104	%	70-130	07.25.19 09.01	
1,4-Difluorobenzene	540-36-3	103	%	70-130	07.25.19 09.01	

Flagging Criteria

X In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.

B A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.

D The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.

E The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.

F RPD exceeded lab control limits.

J The target analyte was positively identified below the quantitation limit and above the detection limit.

U Analyte was not detected.

L The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.

H The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.

K Sample analyzed outside of recommended hold time.

JN A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

MDL Method Detection Limit **SDL** Sample Detection Limit **LOD** Limit of Detection

PQL Practical Quantitation Limit **MQL** Method Quantitation Limit **LOQ** Limit of Quantitation

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

BKS/LCS Blank Spike/Laboratory Control Sample **BKSD/LCSD** Blank Spike Duplicate/Laboratory Control Sample Duplicate

MD/SD Method Duplicate/Sample Duplicate **MS** Matrix Spike **MSD:** Matrix Spike Duplicate

+ NELAC certification not offered for this compound.

***** (Next to analyte name or method description) = Outside XENCO's scope of NELAC accreditation

QC Summary 631828

LT Environmental, Inc.

Ross Draw 3031

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3096414 Matrix: Solid Date Prep: 07.24.19
MB Sample Id: 7682735-1-BLK LCS Sample Id: 7682735-1-BKS LCSD Sample Id: 7682735-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<0.858	250	267	107	267	107	90-110	0	20	mg/kg	07.24.19 23:22	

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3096414 Matrix: Soil Date Prep: 07.24.19
Parent Sample Id: 631753-003 MS Sample Id: 631753-003 S MSD Sample Id: 631753-003 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	10.5	249	285	110	285	110	90-110	0	20	mg/kg	07.24.19 23:51	

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3096414 Matrix: Soil Date Prep: 07.24.19
Parent Sample Id: 631753-012 MS Sample Id: 631753-012 S MSD Sample Id: 631753-012 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	20.4	251	303	113	302	112	90-110	0	20	mg/kg	07.25.19 02:05	X

Analytical Method: **TPH by SW8015 Mod** Prep Method: TX1005P
Seq Number: 3096439 Matrix: Solid Date Prep: 07.24.19
MB Sample Id: 7682726-1-BLK LCS Sample Id: 7682726-1-BKS LCSD Sample Id: 7682726-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<8.00	1000	958	96	986	99	70-135	3	20	mg/kg	07.24.19 22:10	
Diesel Range Organics (DRO)	<8.13	1000	988	99	982	98	70-135	1	20	mg/kg	07.24.19 22:10	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	93		90		99		70-135	%	07.24.19 22:10
o-Terphenyl	72		76		78		70-135	%	07.24.19 22:10

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

[D] = 100*(C-A) / B
RPD = 200* | (C-E) / (C+E) |
[D] = 100 * (C) / [B]
Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
A = Parent Result
C = MS/LCS Result
E = MSD/LCSD Result

MS = Matrix Spike
B = Spike Added
D = MSD/LCSD % Rec

QC Summary 631828

LT Environmental, Inc.

Ross Draw 3031

Analytical Method: **TPH by SW8015 Mod** Prep Method: TX1005P
Seq Number: 3096439 Matrix: Soil Date Prep: 07.24.19
Parent Sample Id: 631827-001 MS Sample Id: 631827-001 S MSD Sample Id: 631827-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	9.74	997	1040	103	1160	115	70-135	11	20	mg/kg	07.25.19 08:59	
Diesel Range Organics (DRO)	83.5	997	970	89	1050	97	70-135	8	20	mg/kg	07.25.19 08:59	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	83		94		70-135	%	07.25.19 08:59
o-Terphenyl	70		74		70-135	%	07.25.19 08:59

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B
Seq Number: 3096465 Matrix: Solid Date Prep: 07.24.19
MB Sample Id: 7682695-1-BLK LCS Sample Id: 7682695-1-BKS LCSD Sample Id: 7682695-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.100	100	0.105	105	70-130	5	35	mg/kg	07.25.19 01:00	
Toluene	<0.00200	0.100	0.0965	97	0.102	102	70-130	6	35	mg/kg	07.25.19 01:00	
Ethylbenzene	<0.00200	0.100	0.111	111	0.116	116	70-130	4	35	mg/kg	07.25.19 01:00	
m,p-Xylenes	<0.00400	0.200	0.227	114	0.237	119	70-130	4	35	mg/kg	07.25.19 01:00	
o-Xylene	<0.00200	0.100	0.109	109	0.115	115	70-130	5	35	mg/kg	07.25.19 01:00	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	97		102		107		70-130	%	07.25.19 01:00
4-Bromofluorobenzene	95		108		114		70-130	%	07.25.19 01:00

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B
Seq Number: 3096465 Matrix: Soil Date Prep: 07.24.19
Parent Sample Id: 631827-002 MS Sample Id: 631827-002 S MSD Sample Id: 631827-002 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00201	0.100	0.105	105	0.0945	95	70-130	11	35	mg/kg	07.25.19 01:40	
Toluene	<0.00201	0.100	0.102	102	0.0921	92	70-130	10	35	mg/kg	07.25.19 01:40	
Ethylbenzene	<0.00201	0.100	0.116	116	0.104	104	70-130	11	35	mg/kg	07.25.19 01:40	
m,p-Xylenes	<0.00402	0.201	0.236	117	0.213	107	70-130	10	35	mg/kg	07.25.19 01:40	
o-Xylene	<0.00201	0.100	0.114	114	0.103	103	70-130	10	35	mg/kg	07.25.19 01:40	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	105		101		70-130	%	07.25.19 01:40
4-Bromofluorobenzene	131	**	118		70-130	%	07.25.19 01:40

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

[D] = 100*(C-A) / B
RPD = 200* | (C-E) / (C+E) |
[D] = 100 * (C) / [B]
Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample
A = Parent Result
C = MS/LCS Result
E = MSD/LCSD Result

MS = Matrix Spike
B = Spike Added
D = MSD/LCSD % Rec

Chain of Custody

Work Order No: 631828

XENCO LABORATORIES

Houston,TX (281) 240-4200 Dallas,TX (214) 902-0300 San Antonio,TX (210) 509-3334
Midland,TX (432) 704-5440 EL Paso,TX (915) 585-3443 Lubbock,TX (806) 794-1296 Craslbad, NM (432) 704-5440
Phoenix,AZ (480) 355-0900 Atlanta,GA (770) 449-8800 Tampa,FL (813) 620-2000 West Palm Beach, FL (561) 689-6701 www.xenco.com Page 1 of 1

Project Manager:	Dan Moir	Bill to: (if different)	Kyle Littrell
Company Name:	LT Enviromental	Company Name:	XTO Energy
Address:	3300 N-A Street	Address:	3104 E Greene St
City, State ZIP:	Midland, TX 79705	City, State ZIP:	Carlsbad, NM 88220
Phone:	432/236-3849	Email:	fsmith@ltenv.com

Work Order Comments

Program: UST/PST ☐ PRP ☐ Brownfields ☐ RRC ☐ Superfund ☐
State of Project:
Reporting: Level II ☐ Level III ☐ PST/UST ☐ TRRP ☐ Level IV ☐
Deliverables: EDD ☐ ADaPT ☐ Other:

Project Name:	Ross Draw 3031	Turn Around	
Project Number:	3/10/2019	Routine ☐	
Project Location	Eddy county	Rush: 2 days	
Sampler's Name:	Fatima Smith	Due Date: 7/26/19	
PO #:	2RP-5330	Quote #:	

SAMPLE RECEIPT				
Temp Blank:	Yes No	Wet Ice:	Yes No	
Temperature (°C):	3.1/2.9	Thermometer ID	R8	
Received Intact:	Yes No			
Cooler Custody Seals:	Yes No N/A	Correction Factor:	-0.2	
Sample Custody Seals:	Yes No N/A	Total Containers:		

Lab ID	Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	TPH (EPA 8015)	BTEX (EPA 8021)	Chloride (EPA 300.0)	Sample Comments
	FS01	S	7/19/19	1104	0.5'	1	X	X	X	
	FS02			1124	0.8'	1	X	X	X	
	FS03			1208	05'	1	X	X	X	
	FS04			1300	0.5'	1	X	X	X	
	FS05			1301	0.5'	1	X	X	X	
	FS06			1525	0.5'	1	X	X	X	
	FS07	↓	↓	1537	0.5'	1	X	X	X	

Fatima

Preservative Codes

MeOH: Me
None: NO
HNO3: HN
H2S04: H2
HCL: HL
NaOH: Na
Zn Acetate+ NaOH: Zn

TAT starts the day recevied by the lab, if received by 4:00pm

Total 200.7 / 6010 200.8 / 6020: 8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO2 Na Sr Tl Sn U V Zn

Circle Method(s) and Metal(s) to be analyzed

TCLP / SPLP 6010: 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Tl U

1631 / 245.1 / 7470 / 7471 : Hg

	Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1			800 7.23.19	2		7/23/19 08:10
3		FedEx	7/23/19 14:00	4		7/24/19 1145
5				6		

Revised Date 022619 Rev. 2019.1

Final 1.000

Page 24 of 25

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: LT Environmental, Inc.

Date/ Time Received: 07/24/2019 11:45:00 AM

Work Order #: 631828

Acceptable Temperature Range: 0 - 6 degC
Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : R8

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	2.9
#2 *Shipping container in good condition?	**Yes**
#3 *Samples received on ice?	**Yes**
#4 *Custody Seals intact on shipping container/ cooler?	**N/A**
#5 Custody Seals intact on sample bottles?	**N/A**
#6*Custody Seals Signed and dated?	**N/A**
#7 *Chain of Custody present?	**Yes**
#8 Any missing/extra samples?	**No**
#9 Chain of Custody signed when relinquished/ received?	**Yes**
#10 Chain of Custody agrees with sample labels/matrix?	**Yes**
#11 Container label(s) legible and intact?	**Yes**
#12 Samples in proper container/ bottle?	**Yes**
#13 Samples properly preserved?	**Yes**
#14 Sample container(s) intact?	**Yes**
#15 Sufficient sample amount for indicated test(s)?	**Yes**
#16 All samples received within hold time?	**Yes**
#17 Subcontract of sample(s)?	**No**
#18 Water VOC samples have zero headspace?	**N/A**

*** Must be completed for after-hours delivery of samples prior to placing in the refrigerator**

Analyst: PH Device/Lot#:

Checklist completed by: Katie Lowe Date: 07/24/2019

Checklist reviewed by: Jessica Kramer Date: 07/25/2019

Jessica Kramer

Northeastern view of release area south of tank battery prior to delineation activities.

Project: 012919047	XTO Energy, Inc. Ross Draw 3031 Battery	LTE Advancing Opportunity
March 20, 2019	Photographic Log	

Western view of final excavation extent.

Project: 012919047	XTO Energy, Inc. Ross Draw 3031 Battery	LTE Advancing Opportunity
July 19, 2019	Photographic Log	